

A HISTORY OF THE ROLE OF TRADITIONAL EDUCATION FOR
THE UNITED STATES AIR FORCE LINE OFFICER CORPS.
1947-1995

A thesis presented to the Faculty of the U.S. Army
Command and General Staff College in partial
fulfillment of the requirements for the
degree

MASTER OF MILITARY ART AND SCIENCE

by

JAMES L. BOSTON, MAJOR, USAF
B.S., United States Air Force Academy, Colorado. 1982

Fort Leavenworth, Kansas
1996

Approved for public release; distribution is unlimited.

19960820 017

REPORT DOCUMENTATION PAGE

Form Approved
OMB No. 0704-0188

Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503.

1. AGENCY USE ONLY (Leave blank)		2. REPORT DATE 7 June 1996	3. REPORT TYPE AND DATES COVERED Master's Thesis, 31 July 95-7 June 1996
4. TITLE AND SUBTITLE A History of the Role of Traditional Education for the United States Air Force Line Officer Corps, 1947-1995			5. FUNDING NUMBERS
6. AUTHOR(S) Major James L. Boston, USAF			
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) U.S. Army Command and General Staff College ATTN: ATZL-SWD-GD, 1 Reynolds Avenue Fort Leavenworth, Kansas 66027-6900			8. PERFORMING ORGANIZATION REPORT NUMBER
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)			10. SPONSORING/MONITORING AGENCY REPORT NUMBER
11. SUPPLEMENTARY NOTES DTIC QUALITY INSPECTED 4			
12a. DISTRIBUTION/AVAILABILITY STATEMENT Approved for public release, distribution is unlimited.			12b. DISTRIBUTION CODE A
13. ABSTRACT (Maximum 200 words) This study examined the historical role of traditional education, defined as education which results in the awarding of a degree, for line officers in the U.S. Air Force (USAF). The research question asked was: For the line officer corps, how has education in the USAF emphasized the need for an academic degree? A literature review focused on the programs of Air University, the USAF education command. Other pertinent areas examined included Air Force Institute of Technology, the United States Air Force Academy, Air Training Command, and basic doctrine. Two hypotheses were proposed: the evolution of the command architecture has emphasized the need for academic degrees, and the evolution of doctrine and policy has emphasized the need for academic degrees. Selected findings were that the first hypothesis was partially supported and the second hypothesis was supported. The USAF succeeded in establishing a culture which prized the individual effort required to obtain a degree education on one's own time. After the conditions which spawned that culture changed, after every officer had an undergraduate degree, the culture persisted in prizing the effort. An advanced degree was a tangible symbol of an officer's dedication to the ideals of USAF professionalism.			
14. SUBJECT TERMS Air Force Professional Military Education, degree education			15. NUMBER OF PAGES 128
			16. PRICE CODE
17. SECURITY CLASSIFICATION OF REPORT Unclassified	18. SECURITY CLASSIFICATION OF THIS PAGE Unclassified	19. SECURITY CLASSIFICATION OF ABSTRACT Unclassified	20. LIMITATION OF ABSTRACT Unlimited

GENERAL INSTRUCTIONS FOR COMPLETING SF 298

The Report Documentation Page (RDP) is used in announcing and cataloging reports. It is important that this information be consistent with the rest of the report, particularly the cover and title page. Instructions for filling in each block of the form follow. It is important to *stay within the lines* to meet optical scanning requirements.

Block 1. Agency Use Only (Leave blank).

Block 2. Report Date. Full publication date including day, month, and year, if available (e.g. 1 Jan 88). Must cite at least the year.

Block 3. Type of Report and Dates Covered. State whether report is interim, final, etc. If applicable, enter inclusive report dates (e.g. 10 Jun 87 - 30 Jun 88).

Block 4. Title and Subtitle. A title is taken from the part of the report that provides the most meaningful and complete information. When a report is prepared in more than one volume, repeat the primary title, add volume number, and include subtitle for the specific volume. On classified documents enter the title classification in parentheses.

Block 5. Funding Numbers. To include contract and grant numbers; may include program element number(s), project number(s), task number(s), and work unit number(s). Use the following labels:

C - Contract	PR - Project
G - Grant	TA - Task
PE - Program Element	WU - Work Unit Accession No.

Block 6. Author(s). Name(s) of person(s) responsible for writing the report, performing the research, or credited with the content of the report. If editor or compiler, this should follow the name(s).

Block 7. Performing Organization Name(s) and Address(es). Self-explanatory.

Block 8. Performing Organization Report Number. Enter the unique alphanumeric report number(s) assigned by the organization performing the report.

Block 9. Sponsoring/Monitoring Agency Name(s) and Address(es). Self-explanatory.

Block 10. Sponsoring/Monitoring Agency Report Number. (If known)

Block 11. Supplementary Notes. Enter information not included elsewhere such as: Prepared in cooperation with...; Trans. of...; To be published in.... When a report is revised, include a statement whether the new report supersedes or supplements the older report.

Block 12a. Distribution/Availability Statement. Denotes public availability or limitations. Cite any availability to the public. Enter additional limitations or special markings in all capitals (e.g. NOFORN, REL, ITAR).

DOD - See DoDD 5230.24, "Distribution Statements on Technical Documents."

DOE - See authorities.

NASA - See Handbook NHB 2200.2.

NTIS - Leave blank.

Block 12b. Distribution Code.

DOD - Leave blank.

DOE - Enter DOE distribution categories from the Standard Distribution for Unclassified Scientific and Technical Reports.

NASA - Leave blank.

NTIS - Leave blank.

Block 13. Abstract. Include a brief (*Maximum 200 words*) factual summary of the most significant information contained in the report.

Block 14. Subject Terms. Keywords or phrases identifying major subjects in the report.

Block 15. Number of Pages. Enter the total number of pages.

Block 16. Price Code. Enter appropriate price code (*NTIS only*).

Blocks 17. - 19. Security Classifications. Self-explanatory. Enter U.S. Security Classification in accordance with U.S. Security Regulations (i.e., UNCLASSIFIED). If form contains classified information, stamp classification on the top and bottom of the page.

Block 20. Limitation of Abstract. This block must be completed to assign a limitation to the abstract. Enter either UL (unlimited) or SAR (same as report). An entry in this block is necessary if the abstract is to be limited. If blank, the abstract is assumed to be unlimited.

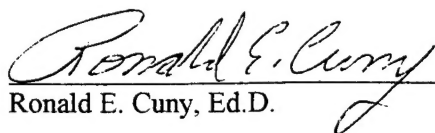
MASTER OF MILITARY ART AND SCIENCE

THESIS APPROVAL PAGE

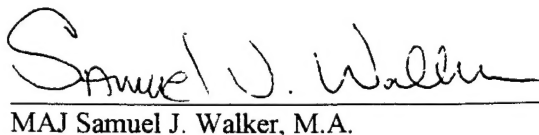
Name of Candidate: MAJ James L. Boston, USAF

Thesis Title: A History of the Role of Traditional Education for the United States Air Force Line Officer Corps, 1947-1995

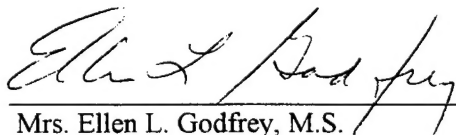
Approved by:


Ronald E. Cuny, Ed.D.

, Thesis Committee Chairman

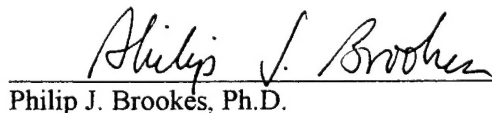

MAJ Samuel J. Walker, M.A.

, Member


Mrs. Ellen L. Godfrey, M.S.

, Member

Accepted this 7th day of June 1996 by:


Philip J. Brookes, Ph.D.

, Director, Graduate Degree
Programs

The opinions and conclusions expressed herein are those of the student author and do not necessarily represent the views of the U.S. Army Command and General Staff College or any other governmental agency. (References to this study should include the foregoing statement.)

ABSTRACT

A HISTORY OF THE ROLE OF TRADITIONAL EDUCATION FOR THE UNITED STATES
AIR FORCE LINE OFFICER CORPS, 1947-1995 by Major James L. Boston, USAF. 128
pages.

This study examined the historical role of traditional education, defined as education which results in the awarding of a degree, for line officers in the U.S. Air Force (USAF). The research question asked was: For the line officer corps, how has education in the USAF emphasized the need for an academic degree?

A literature review focused on the programs of Air University, the USAF education command. Other pertinent areas examined included Air Force Institute of Technology, the United States Air Force Academy, Air Training Command, and basic doctrine. Two hypotheses were proposed: the evolution of the command architecture has emphasized the need for academic degrees, and the evolution of doctrine and policy has emphasized the need for academic degrees.

Selected findings were that the first hypothesis was partially supported and the second hypothesis was supported. The USAF succeeded in establishing a culture which prized the individual effort required to obtain a degree education on one's own time. After the conditions which spawned that culture changed, after every officer had an undergraduate degree, the culture persisted in prizing the effort. An advanced degree was a tangible symbol of an officer's dedication to the ideals of USAF professionalism.

ACKNOWLEDGEMENTS

Many individuals have made contributions, both great and small, to my efforts and I am appreciative of them all. In the interest of brevity I will name but a few. Dr. Shirley Laseter, Air University Library, and Mr. Jerome Ennels, Office of History at Air University, provided off-site assistance from Maxwell Air Force Base. The personnel of the Combined Arms Research Library were instrumental in this endeavor, I could not have succeeded without them. My appreciation extends to Pamela Tijerina, Joanne Knight, John Rogers, Rusty Rafferty, and Carol Ann Harris to name several.

Further acknowledgement extends to all of the members of my thesis committee, Dr. Ronald Cuny, Major Samuel Walker, and Mrs. Ellen Godfrey. Dr. Rebbecca M. Campbell should receive special attention for providing early direction to my efforts.

Primarily I acknowledge the support of my wife who made this effort a part of, if not the best year of my life. at least not the worst year of my children's. Thank-you, Anna.

TABLE OF CONTENTS

	<u>Page</u>
APPROVAL PAGE	ii
ABSTRACT	iii
ACKNOWLEDGEMENTS	iv
CHAPTER	
ONE. INTRODUCTION	1
TWO. LITERATURE REVIEW	7
THREE. RESEARCH METHODOLOGY	17
FOUR. RESEARCH	19
FIVE. SUMMARY AND CONCLUSIONS	108
SOURCES CONSULTED	116
INITIAL DISTRIBUTION LIST	127

CHAPTER ONE

INTRODUCTION

I became interested in the topic of advanced academic education as I developed the perception that I must obtain a master's degree to continue my career in the Air Force. My feeling was that the Air Force placed great value on an officer advancing his level of education yet displayed little interest in the field in which the officer obtained an advanced degree. Therefore by inference there was some role that such a degree had for Air Force purposes beyond simply improving the competence of the officer in his duties. Surely, I reasoned, if the goal of advanced education was simply to improve my ability to accomplish my job, or some future job I might hold, there would be specific direction as to the discipline. My perception, however, was that a master's degree in mechanical engineering would suffice as well as one in public administration or business.

These perceptions display bias and mere opinion. I also perceived that I was not alone in my views; many of my colleagues had similar views. This led me to consider why the Air Force wanted its officers to have baccalaureate and advanced degrees. The basic doctrine manual only provided a partial answer. Specifically, I wanted to understand how had Air Force policy emphasizing the importance of degree granting education for the line officer evolved?

Thesis Purpose

The purpose of this thesis is to trace the evolution of the roles of degree granting academic education for United States Air Force line officers. The primary question is: For the line officer corps, how has education in the USAF emphasized the need for an academic degree?

Research Hypotheses

To answer the research question this thesis examined the following hypotheses:

1. It was hypothesized that the evolution of the command architecture has emphasized the need for academic degrees.
2. It was hypothesized that the evolution of doctrine and policy have emphasized the need for academic degrees.

Significance of the Study

There has been a remarkable increase in the general educational level of the United States Air Force officer corps from its creation in 1947 as a separate service. Since then the percentage of line officers (line officers include both rated and non-rated officers but exclude chaplains, doctors, and lawyers) with a baccalaureate or higher education has increased every year but two (in the early 1950s¹) until the officer corps achieved a universal undergraduate degree education level in 1980.²

In 1947 only 25 percent of the officer corps could claim an undergraduate degree.³ Today every active duty line officer has at least a baccalaureate. The percentage of line officers holding master's degrees has shown a similar increase. In 1964 only 5 percent of line officers held an advanced degree.⁴ According to Air Force Military Personnel Center (AFMPC) figures, today 49.6 percent of line officers have a master's degree.⁵

In 1947, the Air University Quarterly explained: "There are three distinct elements in the education of an Air Force officer: military instruction, technical or professional training and general education."⁶ The current Air Force Manual (AFM) 1-1, Volume 1, Basic Aerospace Doctrine of the United States Air Force, states that "Full professional development requires a balance of training, education, experience, and personal effort."⁷ Whereas the former considered general education a part of the process of educating an officer, the latter subordinates education to the larger concept of professional development.⁸ Has the Air Force simply traded nomenclature or has there been an evolution of the roles for traditional education?

It seems apparent that the conditions which existed when the United States Air Force achieved status as a separate service have changed significantly. The Air Force News Service notes that there is a widespread perception held by the officer corps that an advanced degree is a necessary credential for continued advancement.⁹ The latest Air Force Quality of Life Survey indicates that despite the efforts made to dissuade to the contrary officers continue in their belief that an advanced degree is important to their career.¹⁰ Recently the Air Force was considering changes to the officer promotion system which would have allowed senior raters and other evaluators to use whole person factors, which include advanced academic degrees and Professional Military Education (PME) completion, in their overall assessment of an officer's promotion potential.¹¹ The Chief of Staff of the Air Force since has announced the policy that the completion of an advanced degree would be masked at some promotion boards.¹²

Thus, it seems to this writer that Air Force policy may continue to place emphasis on advanced degrees for its officers. An examination of the evolution of this policy will help contribute to understanding why this continues to be important for both the Air Force and its officers.

Limitations and Delimitations

This thesis is limited to the period following the establishment of the Air Force as a separate service in 1947. This thesis is not a history of the Air University (AU), of the Air Force Institute of Technology (AFIT) or the United States Air Force Academy (USAFA). However, it is limited to a discussion of degree-granting academic education relative to the programs of AU, AFIT, and USAFA and to policy influences from higher levels of command.

This thesis focuses on degree-granting education, but any discussion of that topic must acknowledge its relation to PME. This is because many of the documents, policies, regulations, et cetera, which address the topic do so because of its proximal nature to PME.

This thesis was limited to the line officer corps, rated and nonrated. It did not include discussion of nonline (such as doctors, lawyers, and chaplains) officer education, whose educational requirements are distinctly different. It will not include a discussion of enlisted

education. It will not discuss the curriculum content of degree-granting academic educational programs. It will not attempt to provide a full accounting of every degree granting program the USAF has ever offered nor will it discuss programs initiated or administered by major commands or agencies other than Headquarters, USAF, AU, AFIT, or the USAFA.

In examining the command architecture this thesis was limited to the initial structure in 1947, the AU and Air Training Command (ATC) merger of 1978 and subsequent divestiture of 1983, and the command realignment of 1993.

In discussing the "Career Guides" produced by Military Personnel Center in 1993 this thesis was limited to those published for pilots and navigators. These two guides were chosen as representative of the guides and are not meant to be exclusive. However, a comparative analysis of all of the guides was outside the scope of this research.

Definitions

A distinguishing characteristic of Professional Military Education (PME) is the method by which it is managed. It is organized into precommissioning, primary-level, intermediate-level, and senior-level education, each associated with a particular school. The Air Force Academy, the Reserve Officer Training Corps programs at civilian universities, and the Officer Candidate School manage the precommissioning PME. Primary-level is taught at Squadron Officer School (SOS); intermediate-level is taught at Air Command and Staff College (ACSC); and senior-level is taught at Air War College (AWC). Each level has options not listed above; however, the Air Force school system covers most officers. The term intermediate service school (ISS) refers to ACSC or sister service equivalents, such as the United States Army Command and General Staff College. The term senior service school (SSS) refers to AWC or sister service equivalents, such as the United States Army War College.

Various sources cited use the terms general education, academic education, and civilian education almost interchangeably. For the purpose of this thesis, unless otherwise noted relative to a direct quote, traditional education will be the term reserved for degree-granting educational programs. If a program awards a B.S., M.A., M.B.A., Ph.D., et cetera, it is traditional education.

A rated officer is one who holds an aeronautical rating, such as pilot or navigator. Nonrated officers do not hold such a rating. An example would be a maintenance officer.

Command architecture in this thesis refers to the system of commands and subordinate units established to fulfill the educational objectives of the USAF. Specifically this includes the Air University, the Air Training Command, the Air Force Institute of Technology, the United States Air Force Academy, and the Air Education and Training Command.

Throughout this thesis the use of the masculine, unless noted otherwise, includes both genders.

Assumptions

The first assumption is that the Air University Library, the Combined Arms Research Library, and the United States Air Force Academy Library contain the data required to examine the hypotheses.

A second assumption is that the several questions asked are inclusive enough to adequately test the hypotheses.

¹John P. Lisack, "Air Force Officer Education," Air University Review 16, no. 1 (November/December 1964): 89.

²Universal is defined as 99 percent, achieved for the first time in 1980. One percent either had no degree or their educational level was unknown. "Air Force Almanac: The United States Air Force in Facts and Figures," Air Force Magazine 64, no. 5 (May 1981): 166.

³Lisack, 89.

⁴Lisack, 88.

⁵Steven Heitkamp, Headquarters Air Force Military Personnel Command, Office of Statistics and Analysis, AFMPC Home Page, "Officer Demographics," [on line], available: <http://www.mpc.af.mil/analysis/demograf/demo.htm>

⁶Robert O'Brien, "An Air Officer's Education," Air University Quarterly Review 1, no. 2 (Fall 1947): 9.

⁷Department of the Air Force, Air Force Manual 1-1, Basic Aerospace Doctrine of the United States Air Force, vol. 1 (Washington D.C.: Department of the Air Force, March 1992), 18.

⁸It is clear in context that "general education" is synonymous with my definition of traditional education, contained in Chapter One, section: Definitions.

⁹"Demystifying Promotions--Master's Degrees and Promotability," 13 January 1995, Air Force News Service Electronic Bulletin Board, 2.

¹⁰Merrie Schilter Lowe, "Quality of Life Survey Results Released," 26 September 95. Air Force News Service, 1068.

¹¹Mary W. Daley, Headquarters US Air Force, DPPPEB Roadshow, 13 September 95, narrative slide 42.

¹²Ronald Fogleman, "Air Force 'masks' advanced degrees for some officers." (Washington, D.C.: Air Force News Service), in Columbus Air Force Base, (Mississippi) Silver Wings, 12 January 1996.

CHAPTER TWO

REVIEW OF THE LITERATURE

This chapter reviewed the available literature to determine for the line officer corps, how has USAF education emphasized the need for an academic degree. This chapter was organized in four parts. First the writer considered articles published in the professional journal of the Air Force (AF) that related to military education. Second the writer examined sources that related to the first hypothesis: Evolution of the command architecture has emphasized the need for academic degrees. Third the writer considered sources that related to the second hypothesis: Evolution of policy and doctrine has emphasized the need for academic degrees. The literature reviewed is presented in chronological order in the first three parts of this chapter. The fourth includes a summary of the literature review.

Professional Journal of the Air Force

The first source, the professional journal of the AF Air University Quarterly Review includes articles that reveal trends in educational organization and policy.¹

The index of the journal indicated that from 1947 until 1996 well over one hundred articles were published under the general topic military education. Of these, at least forty-three address some issue relating to academic degrees. These articles are useful in several ways. First, a number were written by policymakers at Air University (AU); the Air Force Institute of Technology (AFIT); the United States Air Force Academy (USAFA); or Headquarters, United States Air Force (HQ USAF). These articles gave insight into the intentions, the philosophy, or the rationale for certain policies and programs. A second useful aspect was that some of the articles provided factual data, such as demographics that relate to the research topic.

As a body of literature the articles appear to indicate that over the last ten years there have been significantly fewer articles published relating to any aspect of military education. This may imply that the issue has not been examined as rigorously in recent years or that there has not been significant controversy in policies or programs of the nature that inspired earlier pieces. On the other hand, when the professional journal of the AF changed its name from Air University Review to Airpower Journal it also narrowed its editorial focus which to a greater extent precluded publishing articles on this topic.²

In 1954 in the article "Air University 2000 AD" AU's Director of Education, Brigadier General Dale O. Smith hypothesized what Air University would look like in the year A.D. 2000. This article provided insight into the goals for organization of AU and specifically addressed academic degrees for PME completion.³

In 1958 the Commandant of AFIT Brigadier General Cecil E. Combs wrote "Science, Liberal Arts, or Both?" Combs explained the rationale for the AF educational program emphasizing both liberal arts, humanities type of curriculum, as well as technical specialist curriculum and how degree education fits into the AF education program.

In 1961 Brigadier General Robert F. McDermott, the Dean of Faculty at USAFA, wrote "Educating Cadets for the Aerospace Age The Academic Program of the U.S. Air Force Academy." In 1968 he wrote "The USAF Academy Academic Program." In the same issue the Superintendent of USAFA Lieutenant General Thomas S. Moorman wrote "Basic Philosophical Concepts of the United States Air Force Academy."⁴ These three articles explain the philosophy behind the academic degree programs of the new institution, USAFA.⁵ These articles provided insight into educational policy but are narrowly focused on the program of the one institution.

Colonel William H. Bowers, the Technical Director of the Air Force Educational Requirements Board, in 1961 wrote "Qualitative Educational Requirements For Professional Military Education." The purpose of the article was to explain some of the work of the board and to provide justification for AF policy regarding academic degrees for new officers.⁶

Major General Arno H. Luehman, the Commandant of AU's Air War College, wrote "The New Air War College" in 1966. In this article the Commandant extols the quality of the institution evident due to policies which emphasized obtaining instructors with academic degrees, as well as a relatively highly educated student body.⁷

In 1975 two articles appeared that addressed specific influences on AF education. Dr. Kenneth J. Groves wrote "Air University And The Professional Education System," and Lieutenant General F. Michael Rogers wrote "Why Professional Military Education?" These articles described the philosophy which policymakers at AU held in developing policy and doctrine at the time.⁸ Shortly afterwards, Brigadier General John E. Ralph wrote "Professional Identity in a Plural World," which described trends in military education.⁹ The same year Dr. Armand J. Galfo of the Education Services Division of HQ USAF wrote "Voluntary In-Service Educational Opportunities: Air Force Policies-Individual Goals," which describes a role for academic degree granting education in the AF education program.¹⁰ These articles were published during what Richard L. Davis and Frank P. Donnini call a transition period in the curricula of PME schools at AU.¹¹ The transition was from the influences of the late Southeast Asia conflict to a management approach to curricula development. These articles attempted to help officers understand the evolution of educational policy.

Professional Military Education for Air Force Officers: Comments and Criticisms, edited by Lieutenant Colonels Richard L. Davis and Frank P. Donnini, was published by the Airpower Research Institute of AU in 1991. It examined influences and trends in AF education and provided background information.¹² Davis and Donnini noted the influence of various civilian institutions in formulating policy and doctrine, and also that although there have been numerous boards established to study PME, "they largely repeat the same questions and recommendations."¹³

Organization and Command

Two works provide useful information relating to the original command organization of the USAF relative to degree granting education. In the Proceedings of the Educational Advisory

Staff Conference of 1947, the senior leadership involved in AF education explain the rationale for both command architecture and educational policies and programs.¹⁴ The report was a prime source for understanding the early philosophy of organization and policy. The 1951 doctoral dissertation of Benton F. Fuller, Jr. "Professional Education of USAF Officers" is a second useful source, in a descriptive capacity, for information on early organization.¹⁵

After the initial command organization was established, the organization went basically unchanged until 1978 when AU merged with Air Training Command (ATC). In 1983 the merger was reversed and the two became separate commands again. In 1993 AU and ATC again merged, this time to create Air Education and Training Command (AETC). In 1994 Dr. Dennis F. Casey of the Office of History and Research at Headquarters AETC published Reshaping the Future From ATC to AETC. This work in the words of the first Commander of AETC General Henry Viccellio, Jr., "outlines the path from idea to reality that Air Force leaders followed in creating the Air Education and Training Command."¹⁶ It details the proposals for various weapons systems transfers, base realignments, and training impacts; and it relates the concerns of various key participants, including congressional delegations. The work provides rationale for organizational changes, however, it focuses on training more than education and to a large extent ignores educational policies and doctrine. In a detailed examination of a fundamental reorganization of the command architecture, which was previously based on the AF definitions of education and training, there is very little consideration given to the effect on education programs. The one exception is the discussion of the Community College of the Air Force (CCAF), an enlisted education program.¹⁷

The official histories of AU from 1978, 1983, and 1987, as well as the ATC histories of 1978 and 1983, not only describe the organizational changes which occurred, but they also relate some of the problems the merger created for policymakers. These include commanders being given responsibility but no authority, loss of prestige relative to other service programs, and a lack of visibility for PME programs.¹⁸

In 1994 AFIT published Air Force Institute of Technology Yesterday Today Tomorrow 1919-1994, a history which spanned the duration of AFIT's existence. This work provides details of the command relationships over the period examined and includes discussion of competing philosophies, especially between the leadership of AU and that of AFIT. It relates restructuring at the Institute resulting from the 1993 merger of AU and ATC.

Policies and Doctrine

The Air Force established a system of boards to study its educational program, draw conclusions, and make recommendations.¹⁹ This system operated from 1946 to 1959 and included the following major Boards:

Gerow Board	February 1946
Fairchild Board	January 1950
Rawlings Board	October 1956
Power Board	November 1959 ²⁰

The Gerow Board established the foundation of the AF educational system. The Fairchild Board resolved the relationship between AU and AFIT. It also decided against establishing an educational prerequisite for commissioning.²¹

The Rawlings Board determined the AU goal of a baccalaureate degree prior to commissioning needed to be reemphasized. It also expressed the desire to encourage officers without this level of formal education to remedy the deficiency.²²

The report of the Power Board reiterated and analyzed the recommendations of its predecessors to determine if progress had been made toward achieving them. The Power Board was chaired by the commander of Strategic Air Command and included as members the commanders of all the major commands in the AF.²³ All aspects of military education were the subject of this board's analysis, but its primary focus was on PME. A good deal of the Power Board's report addresses the accession policies toward AF officer education, and the role degree education plays in the development of professionally competent officers of the future. The accession programs for officers are described, the obvious difference between them being the

academic degree qualifications of the candidates.²⁴ Overall, this report gives a solid understanding of academic degree educational policies of the day.

In 1966 the Office of the Assistant Secretary of Defense (Manpower) published the Officer Education Study, a multivolume assessment of the programs of all of the services.²⁵ The study provided comparisons between some of the like programs of the different services, and described education levels achieved.

The Professional Education Division of the Air Force Human Resources Laboratory, Air Force Systems Command, conducted an analysis of the system for determining and validating Air Force professional education requirements in 1971, which was "the first complete description of Air Force procedures for handling educational requirements."²⁶ They found that although the Air Force uses a systems approach to determining and validating educational requirements, it is an encountered, not a designed system.²⁷ Their report An Analysis of the System For Determining and Validating Air Force Professional Education Requirements, like the 1966 Officer Education Survey, describes policies relating to academic degree education, notably selection procedures for advanced degree programs.

The commander of AU charged Major General Lawrence S. Lightner, Commandant, Air War College, to review AF policies towards the educational programs of the Air War College and Air Command and Staff College.²⁸ Specific topics addressed were student selection policies and procedures. This 1973 Lightner report provides an evolutionary review of AF education, related to academic degree education and AF educational policy.

The Lightner Board's report was issued at the beginning of what was described earlier as a transition period at AU. A review of the reports of the Clements Committee on Excellence in Education (1975), the Senior Military Schools Review Board (1987), the Rostow-Endicott Committee's report (1987), the report of the Skelton Committee (1989), and Long Committee (1989) reveals a trend to improve the education programs of all of the services PME schools, which was driven by congressional interest in those programs. These documents identify specific policy direction by higher levels of command, and a corresponding effect on academic degrees.

Major Glen A. Kendrick's "Annotated Bibliography of Research on the USAF Professional Military Education (PME) System" (1980); and Major Daniel P. Bang's "A Survey of Studies on Factors Affecting Air Force Professional Military Education" (1986) provided time-saving assessments of approximately 200 separate reports and documents. Their focus was on PME, and only indirectly related to the evolution of how education in the USAF has emphasized the need for an academic degree.

An AU research report published in 1989, Roger W. Alford's Prevalence of Careerism Among US Air Force Officers addressed a narrow issue relating the pursuit of advanced academic degree education to careerist behavior in the AF officer corps.²⁹ Research indicates that several of its recommendations were adopted as courses of action by senior AF policymakers. The underlying implication may have been that AF policies relating to academic degrees had resulted in a problem of considerable concern to senior leadership, and for which they sought a remedy.

A United States Army Command and General Staff College master's thesis published in 1995, "Marine Corps Cooperative Degree Program" by Brian J. Hearnberger found that there was a need in the Marine Corps for a program to augment nontechnical systems management positions which were being left unfilled or were held by officers without the specified degree.³⁰ This suggests that the other services may have similar policy problems concerning academic degrees. A second thesis that demonstrated the potential for greater synergy between PME and academic degree needs was Thomas M. O'Sullivan's "The Awarding of a Master's Degree to Regular Course Graduates of the Command and General Staff Officer Course." O'Sullivan recommends changes in PME which would eventually allow all regular course graduates of the Army's intermediate service school be awarded a master's degree.³¹

Summary

The literature review revealed several things. First, there is a plethora of studies, articles and reports on education in the AF. The topic may even seem overexamined. However, the review found no source which examined the topic with the specific focus of this thesis: For the

line officer corps, how has the USAF emphasized the need for an academic degree? So much has been written, yet this area remains unexamined.

For the duration of the AF's existence as a separate service, it has had only one stated goal relevant to academic degree education for the officer corps: to make an undergraduate degree a prerequisite for a commission and by extension, to have all officers educated to the undergraduate level. The prerequisite was established in 1967, universal undergraduate education was achieved in 1980.³² The AF has not established a new goal in this area for nearly thirty years. Given the amount of discourse the original goal generated, it seems odd that the achievement of the goal passed almost without comment and that there has not been an updated goal established to replace it.

The literature review suggested that for the first twenty years the Air Force had a general unity of purpose in the evolution of academic degree education policy. Without that focus answering the research question for the last twenty-eight years was more difficult.

¹When this journal began it was called Air University Quarterly Review. It became Air University Review, and then Air Power Journal. For the duration of its publishing history, which began in 1947 with the birth of the AF, all articles and editorials have been subject to a security and policy review. The magazine has been a "marketplace of ideas" and in the view of the present editor in chief, as well as a past editor, it has done a very good job in attempting to maintain its objectivity. Dr. Earl H. Tilford, former editor of Air University Review, telephone interview with author, 2 October 1995, Carlisle Barracks, PA. and Lt. Col. William Spenser, editor of Air Power Journal, telephone interview with author, 2 October 1995, Maxwell AFB, AL.

²G. Murphy Donovan, "Strategic Literacy," Airpower Journal 2, no. 4 (Winter 1988): 71-72.

³Dale O. Smith, "Air University 2000 AD," Air University Quarterly Review 6, no. 4 (Winter 1953-1954): 22-28.

⁴Robert F. McDermott, "Educating Cadets for the Aerospace Age The Academic Program of the U.S. Air Force Academy," Air University Quarterly Review 13, no. 1 (Summer 1961): 3-17.

⁵Robert F. McDermott, "The USAF Academy Academic Program," Air University Review 20, no. 1 (November-December 1968): 11-20, and Thomas S. Moorman, "Basic Philosophical Concepts of the United States Air Force Academy," Air University Review 20, no. 1 (November-December 1968): 2-10.

⁶William H. Bowers, "Qualitative Educational Requirements For Professional Military

Education," Air University Quarterly Review 13, no. 1 (Summer 1961): 85-89.

⁷Arno H. Luehman, "The New Air War College," Air University Review 17, no. 2 (January-February 1966): 15-25.

⁸Kenneth J. Groves, "Air University And The Professional Education System," Air University Review 26, no. 5 (July-August 1975): 10-28, and Michael Rogers, "Why Professional Military Education?" Air University Review 26, no. 5 (July-August 1975): 2-9.

⁹John E. Ralph, "Professional Identity in a Plural World," Air University Review 27, no. 2 (January-February 1976): 11-25.

¹⁰Armand J. Galfo, "Voluntary In-Service Educational Opportunities: Air Force Policies - Individual Goals," Air University Review, 27 no. 3 (March-April 1976): 26-33.

¹¹Professional Military Education for Air Force Officers: Comments and Criticisms. Richard L. Davis and Frank P. Donnini, editors, (Maxwell AFB AL.: Air University Airpower Research Institute, Air University Press, June 1991), 36-41.

¹²Davis, Donnini, xiii.

¹³Davis, Donnini, 95.

¹⁴David M. Schlatter, "The Educational Program of the Army Air Forces," in Proceedings of the Educational Advisory Staff Conference, (Maxwell Field, AL: Air University Press, 11-12 July 1947), 4-16.

¹⁵Benton F. Fuller, Jr., "Professional Education for USAF Officers" (Ph.D. diss., Yale University, 1951).

¹⁶Dennis F. Casey, Reshaping the Future: From ATC to AETC, (Randolph AFB, TX.: Office of History and Research, Headquarters Air Education and Training Command, December 1994), iii.

¹⁷Casey, 59.

¹⁸Air University History, (Maxwell AFB, AL.: Air University, 1978), 208-215, Air University History, (Maxwell AFB, AL.: Air University, 1983), 9-13, Air University History, vol. 1, (Maxwell AFB, AL.: Air University, 1987), 13-21, Air Training Command History, vol. 1, (Randolph AFB, TX.: Air Training Command, 1978), 20-26, and Air Training Command History, vol. 1, (Randolph AFB, TX.: Air Training Command, 1983), 12-15.

¹⁹Report of The Lightner Board-Review of Air War College and Air Command and Staff College, Lawrence S. Lightner, Major General, USAF, Chairman (Maxwell AFB, AL: 22 March 1973), 5.

²⁰Lightner, 69.

²¹Report of The Conference, by Thomas S. Power, Chairman (Maxwell AFB, AL: USAF Educational Conference, 17 November 1959):, A1, A3.

²²Power, A4, A7.

²³Power, i.

²⁴Power, A 22-26.

²⁵Department of Defense, Office of the Assistant Secretary of Defense (Manpower), Officer Education Study, vol. 1, ([Washington D.C.]: U.S. Department of Defense, Office of the Assistant Secretary of Defense (Manpower), 1966), 1.

²⁶Gene E. Talbert, John P. Hourigan, James L. Hoyt, An Analysis of the System For Determining and Validating Air Force Professional Education Requirements, (Maxwell AFB AL: Air Force Systems Command, April 1971), v.

²⁷Talbert, Hourigan, Hoyt, 7.

²⁸Lightner, 1.

²⁹Roger W. Alford, Prevalence of Careerism Among US Air Force Officers, (Maxwell AFB AL: Air University Press, January 1989), vii.

³⁰Brian J. Hearnberger, "Marine Corps Cooperative Degree Program" (Master's thesis, United States Army Command and General Staff College, Fort Leavenworth, 1995), iii.

³¹Thomas M. O'Sullivan, "The Awarding of a Master's Degree to Regular Course Graduates of The Command and General Staff Officer Course" (Master's thesis, United States Army Command and General Staff College, Fort Leavenworth, 1995), 69.

³²"Air Force Almanac: The United States Air Force in Facts and Figures," Air Force Magazine 64, no. 5 (May 1981): 166.

CHAPTER THREE

METHODOLOGY

The primary question was: For the line officer corps, how has education in the USAF emphasized the need for an academic degree? In order to answer the primary question, this thesis examined two hypotheses.

First Hypothesis

The first hypothesis stated that the evolution of the command architecture has emphasized the need for academic degrees. In order to analyze this hypothesis, the research needed data which explained the rationale for the organization constructed in 1947, and explained the significant changes in the structure since. It also needed data which explained the emphasis of the various key players in the education system of the Air Force: Air University, the Air Force Institute of Technology, and the United States Air Force Academy.

Some of the data came from the Combined Arms Research Library (CARL) at Fort Leavenworth, Kansas. The researcher also used the library resources of the United States Air Force Academy in Colorado Springs, Colorado. Information available from the Air University Library at Maxwell Air Force Base, Alabama, was obtained through interlibrary loan. The Air University History Office provided excerpts from official histories of Air University and Air Training Command. The Air Force Institute of Technology at Wright-Patterson Air Force Base, Ohio, provided sources relative to the history of that institution. Some information was obtained from internet sources of the world wide web via Netscape software, accessed from the Combined Arms Research Library terminals.

The following questions were used to examine this hypothesis and determine its validity:

1. Why were the command organizations of Air University and Air Training Command chosen?

2. What was the emphasis of Air University?
3. How did Air University integrate degree granting education?
4. How did the Air Force Institute of Technology emphasize academic degrees?
5. Who established academic degree education requirements?
6. Did the United States Air Force Academy have a role in emphasizing degree granting education?
7. What was the emphasis of the 1978 merger of AU and ATC?
8. What was the emphasis of the 1993 merger of AU and ATC?

Second Hypothesis

The second hypothesis stated the evolution of doctrine and policy has emphasized the need for academic degrees. In order to analyze this hypothesis the research needed data which offered rationale for educational policies. Data setting forth doctrinal statements from 1947 to the present, career guidance statements the Air Force has made to the officer corps, evidence of trends in military education, and particular policies relating to degree education which are not in consonance with its doctrinal roles was also needed.

Data to analyze this hypothesis was obtained from the same sources as indicated above.

The following questions were used to examine this hypothesis and determine its validity:

1. What was the motivation for the earliest education policies?
2. How did academic degree granting education evolve in basic doctrine?
3. Did policy support the education goal established in 1947?
4. How was degree granting education integrated into career guidance?
5. Have there been any trends which have affected policies for degree granting education?
6. Are there instances of policy support for degree granting education for reasons other than professional development?

The data was analyzed using the foregoing questions to determine whether the hypotheses were supported.

CHAPTER FOUR

RESEARCH

Introduction

The research question which this study examined was: How has education in the AF emphasized the need for academic degrees? This chapter addresses two hypotheses. The first hypothesis was that the evolution of the command architecture has emphasized the need for academic degrees. The second hypothesis was that the evolution of policy and doctrine have emphasized the need for academic degrees.

Command Architecture Has Emphasized The Need For Academic Degrees

This section of the thesis was organized using the questions posed in chapter three relative to the first hypothesis. Each of the eight questions asked were answered by analyzing the data. The section concludes with a summary of the analysis.

Why were the command organizations of Air University and Air Training Command chosen?

Definitions

On 11 July 1947, Major General David M. Schlatter, the Deputy Commanding General (Education), of Air University, addressed those gathered for the first Educational Advisory Staff Conference. He neatly laid out the Air Force's philosophy toward education and the organizational support structure which then existed. He also provided the definition of the Army Air Force (AAF) education and training program. Military training, he defined, as "the process of instruction leading to specialization in a particular technique."¹ He went on to cite several examples: flying an airplane, repairing an engine, or forecasting weather. It is important to

include the latter as the separation of the two ideas is central in the philosophy of the early Air Force policy and organization.

In contrast to this was military education, "that broadening type of instruction which interrelates the many specialties and is designed to prepare officers for increasingly higher levels of command and staff responsibility."² As examples he cites the schools associated with PME identified in chapter one; he also included sponsored courses in civilian colleges.³ The AAF recognized the need for formal instruction, and accordingly established schools to provide it.⁴ These schools were divided between two equal major command organizations, Air Training Command (ATC) and Air University (AU). "Air Training Command, as its name suggests, is concerned with the training process; Air University, with education as . . ." defined above.⁵ In November of 1949 Air University again published the guiding definitions of training and education in "The Training and Education System for Officers of the U. S. Air Force." The definitions emphasize the differences between the two. Training is "technical or professional instruction with practice to gain skills, endurance, or facility. Education is instruction and study which has the broader purpose of transmitting professional principles, conduct and aspirations."⁶

Thus, although the definitions of education and training did not necessarily exclude one another, the AF emphasized the differences by assigning responsibility for each to a separate command organization. The command structure built on those definitions ensured any integration would only result if there was cooperation at the major command level.

The Air Officer's Guide first noted the difference between training and education in its 1950 reprint of the Air University definitions:

Training is defined as technical or professional instruction with practice to gain skills, endurance or facility. Education is instruction and study which has the broader purpose of transmitting professional principles, conduct and aspirations.⁷

In 1955 essentially the same definition was applied to professional education:

Training is defined as instruction in which emphasis is placed upon practice to gain technical skills, endurance, or facility. Professional education is instruction and study which has the broader purpose of transmitting principles, conduct, and aspirations.⁸

The word professional was now associated with education alone, not training. This change in wording was an early indicator of how AU viewed education as the path to professionalism.

Doctor John A. Kline, educational advisor to the Commander, Air University, in 1985 stated that he suspected that in the debate over the difference between education and training some chose to ignore the distinction.⁹ The differences were important due to the level of comprehension demanded, the types of objectives suitable for various curriculums, and the amount of time devoted to the endeavor. While emphasizing that both were important, they were inherently different. He cautioned, "Failure to acknowledge them will hinder learning and, ultimately, performance. Recognizing their relevance in curriculum planning and teaching will improve both education and training in the United States Air Force."¹⁰ Since the inception of the AF policymakers have emphasized the differences between education and training.

Resources

Even before the AF separated from the Army, the Gerow Board defined the future educational architecture for the AF. It stated the broad objectives of the education system were to "ensure a balanced system of progressive education covering all aspects of professional training," prepare officers for assignments, develop initiative, resourcefulness, and mental capacity; and "develop mutual confidence and respect among personnel of the Armed Forces."¹¹ "Results of this Board, with minor modifications, became the basis for the AF Education system."¹² The Gerow Board established that the mission of the education system was to "provide instruction which would stimulate progress in the art of war."¹³ With a purpose statement and a mission, it was left to the AF to devise the command structure to support the education system. The AF then established ATC for training, and AU for education. Resources were assigned to either command largely based on whether the program was defined as training or education. For instance, the Gerow Board had determined that AFIT's mission was to provide instruction in scientific and technological development, which was education, not training.¹⁴ As a result AFIT became part of AU in 1950.¹⁵

The Reserve Officer Training Corps program initially did not lie within the command jurisdiction of Air University, neither did any of the other programs leading to the commissioning of officers. Since the AF classified these programs as training most were assigned to ATC. The AFROTC program initially was viewed as a Reserve Forces affair and was assigned to Continental Air Command. However, until 1952 AU made recommendations as to curricula content.¹⁶ In 1952 after six years of operation the AFROTC program was assigned to AU.¹⁷ Following the AU and ATC merger (in 1978) and separation (in 1983) AU temporarily lost responsibility for AFROTC. In 1987 AU argued for its return, not because the operating command organization was not working, but because AFROTC was an education, not a training, program.¹⁸

Uniqueness of Air University

Air University was established to assume "primary responsibility for the overall educational program for officers."¹⁹ The idea was to centralize all programs in a single command "so that other major commands could be relieved of such responsibility."²⁰ The creation of Air University as a separate command was unique among the services. Never before had the major responsibility for education been centralized in one headquarters.²¹ The establishment of such an organization was considered by some as "the most important educational undertaking in American military history. . . . Its faculty . . . [has] developed . . . the basic doctrines to govern all educational activities within the Air Force."²² Central to these doctrines was the belief AU must proceed to guard "against traditionalism and rigidity of thought"--a belief so strong it was adopted as the Air University motto.²³ By establishing AU the AF leadership had concluded that one headquarters would be able to develop educational programs which could satisfy the needs of the several separate commands with their various roles and missions.

Avoid Duplication

Reflecting General Fairchild's concern with duplication, the "policy of AU from its inception [was] that no program of education be offered in the educational system under its

jurisdiction which duplicates programs offered by civilian colleges and universities.”²⁴ It was the view of AU that it could not justify its existence if it merely repeated what instruction was offered by civilian institutions. This organizational tenant was tested with AU’s involvement with AFIT. If AFIT were to become a graduate level university of science and technology, as was its desire, then AU perceived the budget formulators would soon consider it redundant and unnecessary. AU initially suggested AFIT had outlived its usefulness and ought to be closed, or at least that AU should be removed from its supervisory obligations.²⁵ The Fairchild Board resolved this dispute by defining a role for AFIT. However, the AFIT problem illustrates the importance AU attached to not duplicating programs available elsewhere. It would sooner forego control of an education program than risk its existence by allowing a perception of redundancy.

Summary

In order to solve the problems caused by the burden of education, the AF first categorized a program as either education or training, then assigned responsibility to the appropriate command. Fearing duplication of programs available in the civilian world, AU chose not to emphasize degree education, as it perceived this could lead to its demise.

What was the emphasis of AU?

Vital Role

AU saw its role, born out of World War Two experiences, as absolutely vital to the survival of the United States. The primary means for AU to fulfill its role would be the schools it directly administered; the Air War College, Air Command and Staff College, and the Air Tactical School.²⁶

As the mandate of the Gerow Board indicated, AU was to “develop mutual confidence and respect among personnel of the Armed Forces.”²⁷ Major General Schlatter emphasized, too, the joint accent of the AAF Educational System.²⁸ His comments to the Educational Advisory Staff Conference give particular weight to developing the importance of a system which could continue to evolve, in the face of rapid technological development, into “*a sound theory of air*

power.”²⁹ Major General Schlatter saw this as the key to the success of the Army Air Force in World War Two, and the key to the German failure. He summarized with the statement: “We measure, then, the mission of Air University in no less terms than those of survival of the United States.”³⁰

The school system AU developed to fulfill its vital primary mission was influenced by the school systems of the sister services. None of the PME schools were degree-granting institutions. Also, according to Major General Schlatter these schools were so important that the survival of the United States depended on them. With such importance attached to these schools little doubt exists as to where AU placed its emphasis: the non-degree awarding schools it directly administered.

Fundamental Need for PME

In the early 1970s the central selection boards, not controlled by AU, had adopted a policy of “selection out.” This policy involved bypassing candidates for attendance at PME whose record indicated “he already possessed the combination of experience, education, training, and performance necessary to advance him to higher levels [of command and rank].”³¹ The Lightner Board emphatically condemned the policy, characterizing it as arbitrary and “beyond the competence of PME selection boards.”³² The Lightner Board emphasized the fundamental incompatibility of advanced degree programs towards achieving the objectives of PME:

The PME curriculums are specifically oriented towards . . . those aspects of subjects that are uniquely applicable to the military profession. Granting the widest possible latitude for equivalency, an analysis of PME curriculums shows little commonality with advanced degree programs in general, and shows almost no correlation whatever with graduate degree programs in such fields as engineering, humanities, biological sciences, behavioral sciences, and physical sciences. This is as it should be. The Air Force could not justify PME schools existence unless the schools provide educational experiences not available elsewhere.³³

It was the view of the Lightner Board, chaired by the Commandant of the Air War College, that no combination of experience and education could replace the education obtained at AU’s PME schools. PME itself, not PME equivalency, was required to advance to higher levels.

The Educational Advisor to the Commander of Air University explained the Air Force concept of professional development in 1975. The Air Force professional education system consisted of three distinct, though not mutually exclusive, areas: professional military education, specialized professional education, and continuing education.³⁴ PME was addressed through the Air Force school system while specialized professional education, which was essential to the Air Force mission, was not. "These high-level courses, usually at the graduate level, are conducted by degree-granting civilian and military institutions."³⁵ Continuing education takes place in the same schools that conduct military and specialized education. Its purpose was to prevent the obsolescence of the other two types.³⁶

The Commander of Air University further explained the professional development of an AF officer as a process leading to new attitudes, knowledge and skills (see Figure 1.)³⁷ Lieutenant General Rogers reiterated the earlier expressed opinions that "To be considered a professional, one must belong to a corps that embodies formal education, a sense of corporateness, a mystique, and a responsibility to a higher authority."³⁸ He then concentrated on the role of PME in that formal education process. While acknowledging the role of advanced academic schooling in leading to new attitudes, increased knowledge and improved skills, he concluded there was a "fundamental necessity for PME," but made no such conclusion about advanced academic schooling.³⁹

The director of Doctrine, Concepts and Objectives at Headquarters USAF noted that the variety of subjects the Air Force would have its people investigate "would exhaust the most dedicated scholar."⁴⁰ He concluded the Air Force was forced to focus on specific military functions. He stated further the result of this focus was evident in trends in military education which must be encouraged. One such trend was a renewed emphasis on purely military aspects of warfare.⁴¹

While the policymakers knew that PME was only one aspect of the educational needs of officers, they tended to emphasize the importance of, indeed the fundamental need for, PME.

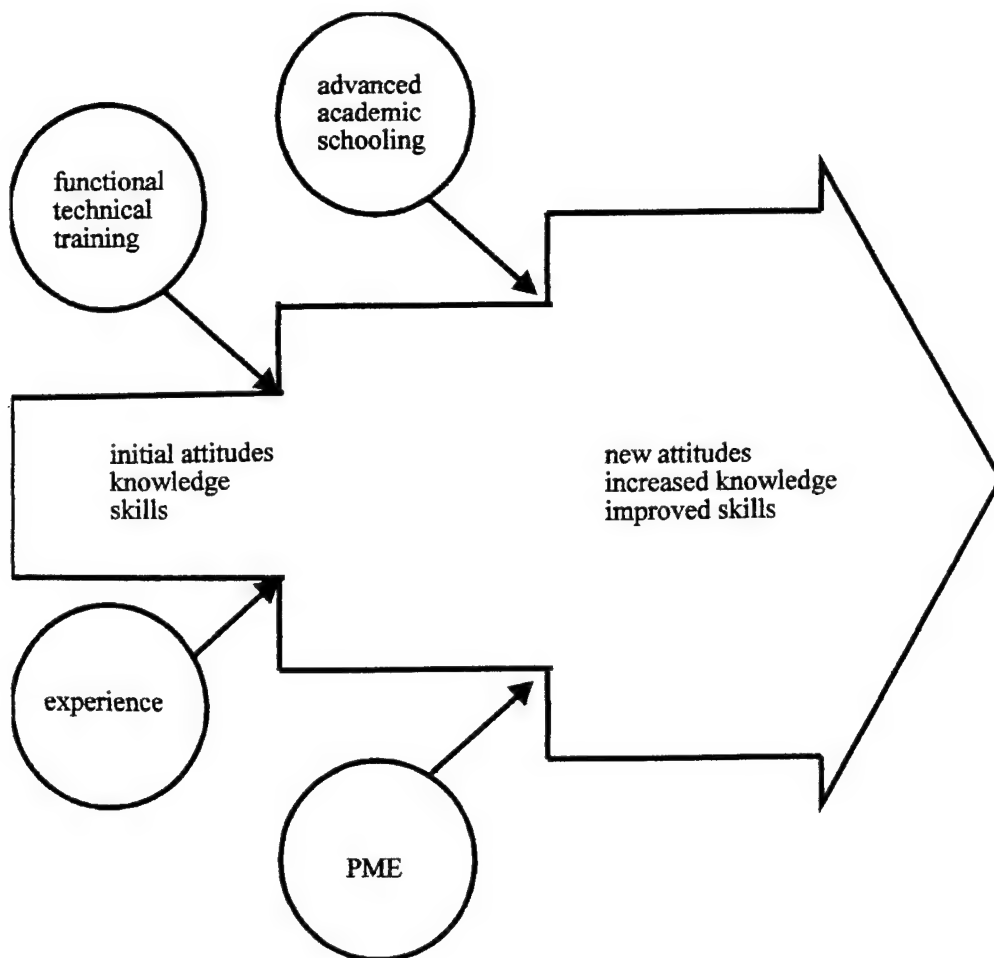


Figure 1. Professional Development⁴²

Prestige and Faculty Competencies

Though proficient and experienced from World War Two, many of the faculty of Air University were not college educated.⁴³ In view of the emphasis placed on advancing the general academic education level of the officer corps it was a paradox that little had been done to improve the academic backgrounds of the faculties of the PME schools.⁴⁴ The academic proficiency of the students enrolled in the various schools was beginning to noticeably exceed that of the faculty in several telling statistics. Members of the Air University Board of Visitors had repeatedly addressed this concern.⁴⁵

The criteria by which desirable academic levels of the staff would be judged by the 1963 Ad Hoc committee appointed to study the issue included a greater emphasis on prestige. To provide for maximum educational outcomes for the students, as well as for the Air Force and its officers, there must be a concerted effort to maximize prestige and respect for the PME schools.⁴⁶ To maximize student outcomes the faculty needed the expertise to conduct and guide independent study and research. This required a graduate faculty educated at accredited colleges and universities.⁴⁷ In 1963 the percentages of faculty with a graduate degree were: Air War College, thirty percent; Air Command and Staff College, twenty-two percent; Squadron Officer School, seven percent.⁴⁸

The Ad Hoc committee's concern about school prestige recognized that the achievement of the graduates was not the benchmark. The prime measure of prestige of an institution is "the ability and reputation of the faculty."⁴⁹ They noted:

Just last month, an overall rating of the nation's universities, as is customary in such evaluations assigning relative order of excellence, placed top emphasis upon degrees held, special honors received, and significant research writings and similar achievements of the respective faculties.⁵⁰

The argument continued that as the prestige of the faculty increased the desirability of attending the institution would increase, competition for the limited slots would increase, and the composition of the student body would improve.

Clearly, if we would gain prestige for our schools and those who serve on their faculties . . . we have no choice but to assemble faculties whose overall capabilities will command maximum respect among students as well as within the academic world.⁵¹

Testimony to the Air Force's acceptance of these concepts exists in the 1966 article in Air University Review. Major General Luehman, Commandant of Air War College, commented that the quality of "The New Air War College" was enhanced by the selective nature of the Central Senior Service School Selection Board which sends only "the cream of the Air Force lieutenant colonel population."⁵² A measure of this cream included the information that of the student body 90 percent had some college, 64 percent held bachelor degrees, 24 percent held master's degrees and 14 percent held doctorates or had other advanced graduate work.⁵³ The Commandant

believed that the quality of the institution was directly dependent on the quality of its faculty, 84 percent of which now had a master's degree while 14 percent held doctorates.⁵⁴

Nowhere was this issue of prestige more clearly articulated than in the Report of the Air University Committee on the Academic Levels of the Faculties of the Professional Military Schools which stated: "Thus our officer corps, when viewed by others than ourselves, no more constitutes a true profession than do those who work, say, for General Motors or Sears Roebuck."⁵⁵ As of 1949, the Army could claim over seventy percent of its officer corps held a baccalaureate degree or higher, the Navy could claim over sixty percent and the Air Force weighed in at about forty percent.⁵⁶ The issue of prestige for the Air Force revolved around the search for identity as a profession. The Ad Hoc Committee concluded:

A requisite of every true profession is that it be supported by schools granting undergraduate and graduate degrees in areas of study appropriate to the profession's requirements. The professional military schools must upgrade to such a capability if officers of the Air Force are to command respect and prestige as members of a true profession rather than to continue being regarded simply as "professionals."⁵⁷

The Office of the Assistant Secretary of Defense Officer Education Study of 1966 noted that the Air Force led the other services in the percentage of officers without a degree, lagged in the percentage with a baccalaureate or better, and "stands in sharp contrast to the other Services in that only 30% of its generals are service academy graduates and 20% of them do not have a college degree."⁵⁸ It also noted that "As was true with the Air Force generals, the O6's [Colonels] also have the largest percentage of all Services without degrees. The percent is almost twice that of the other Services O6's and twice that of Air Force Generals."⁵⁹

Unfortunately, few other sources were as direct in stating the need to establish service in the Air Force officer corps as a profession. The references implied education was needed for "professional competence," and the pursuit of education was often compared to the education required of doctors and scientists.⁶⁰ The professional journal of the AF frequently called attention to the requirement of a profession for continuous education. These were statements of opinion, yet widely repeated. For the first fifteen years of existence as a separate service fear that the profession was losing prestige, and comparisons to other professions' educational needs were

plentiful.⁶¹ Clearly the evidence suggested a wide cross-section of the officer corps believed there was a need to establish the credentials of their "profession" and education was the key.

Lieutenant General Alvan C. Gillem, Commander of Air University, created the Lightner Board (September 1972) to review Air Force guidance to AU for validity and currency, and examine student selection policies and procedures relative to the education programs of Air War College and Air Command and Staff College.⁶² The board noted that the policy changes of 1965 had resulted in a trend towards a higher educational level of the student bodies and faculties at both colleges.⁶³ An elective program was introduced 1968 "to broaden student backgrounds and to assist them in becoming articulate advocates of aerospace power."⁶⁴ In the summary of trends the board noted that the quality of the student selection was high, and justified this assessment with statistics on the percentage of the students who held degrees.⁶⁵ There were no references to any specific competencies or disciplines, simply the percentages.

The AF saw the inadequate level of formal academic degree education as a handicap in accomplishing its mission because the faculty was not accorded the respect it required to function effectively. Both for the officer corps generally and for the faculties of the PME schools prestige was an element of capability. Advanced education was a link to professional status. This was important in their view because prestige itself would eventually lead, through competition to attend, to an improved school. Furthermore, the AF has universally associated academic degree accomplishment with quality. The AF measured the quality of a group by figuring the percentage of those in the group with a degree.

Summary

The emphasis of AU has been on the programs under its jurisdiction which are categorized as PME. AU saw the role PME played in the education of the officer corps as vital to the survival of the nation. It also saw a fundamental need for PME in officer education which could not be obtained elsewhere. Degree education held an important role for AU as well. In order to enhance the prestige of the faculty and the institution, and thereby increase its ability to perform its vital mission, AU required a quality staff and student body. A prime measure of that

quality was the academic credentials of the faculty and student body. The AF view was that as the percentage of officers on the staff with a degree increased, the respect accorded the institution would increase. That would lead to more intense competition to attend, and a cycle would develop with AU reaping the benefits of ever-increasing competency.

How did AU integrate degree-granting education?

George Washington University

George Washington University (GWU) and AU had established a cooperative degree program which by the 1962-1963 academic year involved the Air War College and the Air Command and Staff College.⁶⁶ Operating from a center on Maxwell AFB, GWU offered degrees in business administration and public affairs at the graduate level, as well as undergraduate. The program was extremely popular and participation increased rapidly.⁶⁷ Students were required to be concurrently enrolled in GWU in after-hours courses to satisfy the requirement for a degree. The student's thesis had to be acceptable to GWU as well as to the service college.⁶⁸ After graduating from the service college the student had to either stay for up to six weeks and complete the thirty semester hour requirements at the GWU center on base, or complete them at the main campus within five years.⁶⁹ By 1966 the Air Force saw 962 degrees awarded through the program.⁷⁰

The program, however, was embroiled in controversy. The primary concern was that the commandants of the service schools felt there was a conflict between the two programs which the student may resolve in favor of the GWU studies. On the other hand, many students considered the GWU program as complementary to the service college programs, especially for the brighter ones.⁷¹ "It has been suggested that, if the service college students have sufficient time to participate in extracurricular educational programs, then the service college programs may not be sufficiently demanding to require the undivided attention of the students."⁷² To address these concerns the Air War College conducted a survey of its graduates who had participated in the program from 1960 through 1964. Of the respondents 83 percent considered participation reasonable or reasonable but a strain, and only 18 percent stated they did less service college work

due to their participation. "Significantly, 11% of the graduates participating in the GWU program felt that they did more and better work in the Air War College than they might otherwise have done."⁷³ Sixty-three percent felt the program was of great value and the Air Force should encourage participation.⁷⁴ Some research found that GWU program participants' performance in the professional part of the AWC program exceeded the nonparticipants'. "Very little data is available to support the positions of the commandants and other opponents of the program."⁷⁵

This program was one of the earliest efforts to promote commonality between PME and academic degree education. It demonstrated a potential conflict between two objectives of Air University to promote advanced education and to promote the importance and prestige of PME.

Suspensions

In 1973 the Lightner Board addressed the issue of what position to take regarding the awarding of advanced degrees for Air University schools. The Lightner Board noted the principal obstacle to such an effort "was the civilian educational community."⁷⁶ This community's objections made absolutely clear their position, they sanctioned no trespass by the federal government on their authority. Specifically, the American Council on Education objected because the military couldn't afford free inquiry, the federal employee's primary interest should not be education, allowing the Federal Government use of the symbols of education would denigrate those symbols' value, and it would lead to an expansion of federal control.⁷⁷ The Joint Chiefs of Staff (JCS) agreed in 1968, again in 1972 that to award a degree

would not add to the professional reputation of the individual graduate, would not enhance the prestige or the academic excellence of the college, would not decrease the desirability of obtaining an advanced degree in a specific discipline from an accredited university that would be recognized by both the academic community and by the services, and would not increase the assignment potential of the individual graduate to joint staffs or joint activities.⁷⁸

From the first, AU gave serious consideration to awarding a degree for some of its PME programs. Evidence of their desire to do this can be traced at least as far back as 1953.⁷⁹ However, the civilian academic community presented an obstacle which had affected policy

decisions at AU. Finally, a major obstacle to degree-granting authority was the Department of Defense's JCS.

Auburn Cooperative Degree Program

In 1973 the Lightner Board addressed the issue of academic degree education. The GWU cooperative program had been abolished, and the Air War College and ACSC had established cooperative degree programs with Auburn University which the Board noted had been initiated with reluctance, and managed intensely.

Properly managed, they enhance the regular programs and provide an excellent opportunity and motivation for the more able student. . . . It was believed these programs might have an unfavorable effect upon the regular professional military curriculums. Consequently, great care was initially taken to insure that the cooperative degree programs did not undermine primary missions and objectives of the schools. The Board has found that these constraints have been effective.⁸⁰

The Board recommended the programs be continued. In 1975 the Clement Committee on Excellence in Education reviewed the cooperative degree programs of all the service colleges and questioned the wisdom of any program which competed for the students' time and attention. Accordingly, the commandants were directed to change their programs eliminating those which were not integral parts of the curriculum, and eliminating those that included prior or subsequent assignment considerations to facilitate obtaining a degree.⁸¹

Again the AF thwarted AU's efforts to integrate academic degree education into its program.

SAAS

In 1989 General Larry D. Welch, the USAF Chief of Staff, approved the concept of establishing a second year program to Air Command and Staff College. The impetus was the Skelton Report and the model was the United States Army School of Advanced Military Studies.⁸² The AF desired to create a school which could foster the kind of strategic visionaries who developed air power doctrine during World War Two. The School of Advanced Airpower Studies (SAAS) was intended to be that school, and the intention included accreditation. The curriculum

was "designed so that it qualified for accreditation as a masters degree program."⁸³ Lieutenant General Charles G. Boyd, the AU commander expressed this desire specifically to the nascent SAAS faculty. "He warned that they should keep in mind that the school's goal was to be a graduate education program and not just another PME institution."⁸⁴

The procedure military educational institutions followed to obtain degree-granting authority required AU to justify the need to the Department of Education. AU stated the primary reason students needed to hold the degree was:

To meet the needs of the Air Force for airpower conceptualizers, it is essential for the Air University to possess authority to award a master of airpower studies degree to all officers who successfully complete the curriculum of the School of Advanced Airpower Studies. The degree and the approval and accreditation process associated therewith serve as the best possible guarantees that the high standards and intellectual integrity required of air strategists to provide for the common defense will continue to be met over the long haul.⁸⁵

Currently SAAS graduates receive a Master of Airpower Art and Science degree, however, the accreditation process has not been completed.⁸⁶ The statements justifying the program stand in sharp contrast to the beliefs of the Joint Chiefs of Staff in 1972, who emphatically denied the necessity of a degree for PME. The graduates of SAAS numbered about 25 per year and their assignments were intensely managed so that "their abilities could be fully utilized."⁸⁷ Again in contrast to the 1972 belief that a degree would not increase their assignment potential these graduates were in high demand.

This AU program was the first effort to capitalize on the potential of degree education for the benefit of PME. However, the program had an exceedingly limited charter. The benefits of the SAAS program were to be extracted from an extremely small pool of officers.

Summary

There is ample data to support the conclusion that AU had long desired to integrate degree education with its PME programs. The initial approach was to use civilian universities in a cooperative arrangement whereby officers concurrently completed the obligations of two programs. These attempts were thwarted by the Joint Chiefs of Staff and congressional committees. Ironically, it was a congressional inquiry which led to AU approaching the problem

from a different perspective which ultimately proved successful. In the SAAS program AU had realized in some measure its dream of becoming an educational institution at the graduate level.

How did AFIT emphasize academic degrees?

History

The history of AFIT predates that of AU by several decades. Former names included the Air Corps Engineering School, Army Air Forces Engineering School, and the Army Air Forces Institute of Technology. By the close of World War Two its education program was described as "like a Master of Science degree without a thesis."⁸⁸ AFIT's role in the research and development of technology in the old Army Air Corps and Army Air Forces was reflected in its assignment to Materiel Command, then to the Air Technical Services Command.⁸⁹ By 1945 AFIT was able to present a huge Air Fair which Orville Wright called "the greatest display of technical research equipment and airpower I have ever seen."⁹⁰ The Institute had accomplished its mission through programs which definitely fit within the scope of Air University's definition of education; however, its historical role was as a pioneering research facility for the AF.

Philosophy

As the AF prepared for the post-war period the founders of the expanded Army Air Force Technological Institute endeavored to make AFIT "a source of stimulation to the *imagination* of officers [emphasis in the original]."⁹¹ When AU was established so was the Air Materiel Command (AMC), which replaced the Air Technical Services. AMC gave AFIT the mission of conducting educational courses at undergraduate and graduate level, primarily in engineering fields, to improve and maintain the technical competence of the AAF.⁹² The potential for the overlap of responsibilities and duplication of effort between AU and AFIT was recognized by Major General Muir S. Fairchild, Commander and founding father of Air University, who consulted frequently with the staff of AFIT.⁹³ General Fairchild (himself a graduate of the Institute's predecessor, class of 1929) perceived this desire to create "an undergraduate engineering school similar to M.I.T. [Massachusetts Institute of Technology] or Cal Tech"⁹⁴

would prove to be a duplication of civilian schools which, sooner or later, would result in its demise. He suggested to Headquarters, AAF, that "it might be desirable" ⁹⁵ to remove the responsibility of AU for broad supervision of the curricula of AFIT. Contrary to this suggestion, AU assumed greater responsibility for AFIT's programs. ⁹⁶

The men responsible for the vision that guided AFIT, Dr. Theodore von Karman and Dr. John Markham of the Massachusetts Institute of Technology (M.I.T.), were men of established intellectual prowess and international academic reputation. In their view a narrow concept of training would not meet the needs of the AF in a "program designed to lead to the development of the airplanes of tomorrow." ⁹⁷ Implicit in the Von Karman and Markham vision was the need for accreditation of undergraduate programs, and eventually graduate programs, at AFIT. ⁹⁸

Conflict with AU Resolved Through Fairchild Board

In 1948 AMC concluded that the Air Force should seek to obtain authority to award degrees through AFIT. ⁹⁹ Air University was simultaneously advancing the position that AFIT had outlived its usefulness, no longer had a mission, and should be discontinued. ¹⁰⁰ The Scientific Advisory Board, formed to study the research and development situation in the Air Force, published a strong recommendation affecting the future role of AFIT. Their report emphasized AFIT's connection with fundamental research. They also determined the greatest benefit to the AF would be to turn AFIT "into a graduate school of engineering which would rank with the best civilian institutions of this kind." ¹⁰¹ The Fairchild Board, convened in 1950, supported this position. The pursuit of an in-house graduate-level school of engineering, as opposed to depending upon civilian institutions, was necessary for two reasons. First, the engineering of weapons had no civil counterpart and was best accomplished in a service establishment. Second, the research facilities available at Wright-Patterson Field were

unmatched in civilian institutions, and which cannot be duplicated without large and unjustifiable expense. These facilities should be used for research, and the proposed development of the Air Institute of Technology is the most direct and immediate way of ensuring that they are so used. ¹⁰²

The Fairchild Board recommended that as an educational institution AFIT belonged in the "education command" and should be part of AU. On 1 April 1950 this occurred.¹⁰³ The Fairchild Board also recognized the potential attraction AFIT held for top-flight civilian scientists. The new Research and Development Command wished to assemble such caliber researchers and the opportunity to teach part time and engage in research at Wright-Patterson AFB would be a powerful incentive if AFIT was a prestigious educational institution.¹⁰⁴ However, the driving force which pushed the development of AFIT was the need for engineers who were in critically short supply throughout the country.¹⁰⁵

Accreditation

The unwillingness to abandon the exceptional facilities at Wright-Patterson, the lack of engineering talent available in the general population, the desire to attract high caliber researchers and scientists to the Air Force, AFIT's historical role in technology development and the need for graduate engineers, all led towards AFIT pursuing the goal of accreditation. To avoid confusion over action taken to obtain the Air Force Academy the issue was not pursued vigorously until 1952.¹⁰⁶ Inconclusive deliberations with the North Central Association, the accreditation association with geographical jurisdiction, as well as the United States Office of Education inquiries into whether government-supported schools should grant degrees at all, delayed the issue.¹⁰⁷

In a letter to the US Office of Education AFIT officials justified accreditation with references to the historical role of AFIT, the "ever increasing technological complexities of weapons and the mounting importance of science in aerial warfare, . . . deficiencies in the Air Force scientific and technical personnel categories" and urgent AF requirements:

The USAF Institute of Technology conducts a program of professional education for Air Force officer personnel in the various fields of engineering and related areas of studies in order to meet these urgent requirements. Some of those requirements are met by detailing officers for study at civilian colleges and universities; however, others can be more effectively fulfilled at the Institute's Resident College.¹⁰⁸

The Acting Secretary of the Air Force James H. Douglas, in response to the Senate Committee on Armed Services inquiry for the views of the Department of Defense on the legislation to authorize degree-granting authority to AFIT, provided three justifications. The first issue was need. AFIT "trains selected Air Force officers in fields of engineering for which the Air Force has an ever-increasing and urgent requirement. Its curriculum does not duplicate that offered by civilian institutions."¹⁰⁹ The second issue was fairness. The Navy's Postgraduate School had such authorization and AFIT, "whose standards are just as high,"¹¹⁰ should also. And finally, degree-granting authority was sought because accreditation was needed "in order that its students and faculty may receive deserved recognition."¹¹¹ Approval was granted in 1954.

Summary

AFIT was historically tied to research and development. The AF need for professionally educated, competent engineers and the inherently academic aspect of AFIT's mission created a natural tendency to evolve into something akin to a civilian university or college. Because AU was the education command it was perhaps inevitable that AFIT would become one of its components. However, due to the reluctance to duplicate programs available elsewhere, AFIT had to first convince AU that they were offering something unique and essential. Once this occurred, AFIT was cleared to become the locus for degree-granting education in the AF. Although awarding degrees to its graduates would enhance the capability of AFIT to perform its mission, similar to the role degree education performed for AU a decade later, it was not the only reason such authority was sought. Equity among the services and fairness to the men performing graduate level work were also factors in the equation. Discussion at the time did not imply AFIT was to become the sole supplier of advanced degree education for the AF.

Who established academic degree education requirements?

AU Goal

In 1947 AU believed the Air Force's requirement for specialization in many fields "establishes an inescapable demand for young college trained officers."¹¹² The Plans Section,

Academic Staff Division of Air University identified some of the specific needs in select military operational specialties. The identified needs included: engineering degrees in aeronautics, mechanics, petroleum, civil, architectural, chemical and safety; technical degrees in nuclear physics, ballistics, dynamics, optics, metallurgy, electrical and meteorology. They also identified shortfalls in photography, public relations, journalism, and statistics.¹¹³ However, due to the generally low percentage of college-educated officers, men with the qualifications necessary were not available. This was especially true where there was a requirement for an advanced degree. Not only were the holders of such a degree in short supply, the number of those with the academic credentials necessary to attend graduate school were also in short supply. The demand for graduate-level education far exceeded the supply of qualified officers. This forced the AF to fill some of the positions with officers who had not even attained the baccalaureate level.¹¹⁴

In 1947 AU acknowledged the problem to the Educational Advisory Staff. The number of officers with an undergraduate degree was "not much over 50% of the total."¹¹⁵ Other sources variously claimed 24.7 percent to 35.5 percent of AF officers held a degree in 1947.¹¹⁶ Whatever the correct number, there was a general consensus this was a problem in need of a solution. Subsequently, AU, beginning in 1947, established the goal to make a Bachelor's degree a prerequisite to commission.¹¹⁷

Board System

Beginning in 1946 and lasting until 1959 the Air Force established a system of boards to study its educational program, draw conclusions and make recommendations.¹¹⁸ The major Boards were:

Gerow Board	February 1946
Fairchild Board	January 1950
Rawlings Board	October 1956
Power Board	November 1959 ¹¹⁹

The Gerow Board established the framework for the education system but had no role in establishing specific educational requirements. The Fairchild Board did not recommend a minimum educational level for commissioning officers "due to the inherent selectivity in the

present commissioning criteria.”¹²⁰ The Air Force Chief of Staff agreed with the board that this selectivity would “result in a continuous raising of the educational level of the Regular Officer Corps.”¹²¹ The Rawlings Board determined the Air Force should reemphasize the goal of a baccalaureate degree prior to commissioning, that waivers to this policy should be rare, and where academic degrees are lacking the officers should remedy the deficiency by his own efforts.¹²²

The Power Board noted that although the goal had been reemphasized, little progress had been made. The Board also noted that regulations governing effectiveness reports and promotions had been revised to “require consideration of individual efforts to seek additional education.”¹²³

In 1951 AU published a Career Manual for USAF Officers which associated career fields with undergraduate courses. General engineering, for example, was related to the transportation and procurement career fields; math was related to atomic energy and armament fields; and business administration, advertising, accounting, statistics, and personnel management were related to supply, transportation, personnel procurement, comptroller, and legal career fields.¹²⁴ The AF, however, still needed a comprehensive program to determine precise requirements; this was not attempted until 1958.

AFERB

The need to identify and describe current as well as future requirements led to the establishment of the Air Force Educational Requirements Board (AFERB) in 1958.¹²⁵ The AFERB established minimum percentages for the educational level of line officers. These were: high school only--0 percent; some college, no degree--19 percent; bachelor's degree--68 percent; master's degree--12 percent; doctoral degree--.7 percent.¹²⁶ The AFERB also established the “Desirable Long Range Officer Qualitative Educational Requirements” in order “to provide a professionally competent officer corps.”¹²⁷

The AFERB was able to describe and identify current and future educational requirements for each of the over two hundred and fifty Air Force specialties, which they categorized into nine general areas of study: administration management and military science; arts, humanities and

education; biological and agricultural science; engineering; law; mathematics; medical sciences; physical sciences; and social sciences.¹²⁸

In addition to these determinations above, the AFERB delved into topics relating to the overall educational program for officers. The AFERB definition of a professional AF officer included several key elements: leadership, management, ethics of service above self, the ability to communicate, and participation in specialized education. This last element, specialized education, was a continuing process in which the professional officer expanded his knowledge and understanding. Headquarters USAF adopted, with minor modification, this definition.¹²⁹

The AFERB divided the officer career management structure into a spectrum covering three areas. In a diagram of the structure two areas were linked, the third was not. Scientific and engineering support career areas formed a continuum with technical support career areas. Operations career areas were depicted as separate from this continuum. All career areas identified called for 100 percent of officers to have a baccalaureate degree. The scientific weather career areas (four of them) called for 100 percent of officers to have masters in meteorological or natural science. The research psychologist career area listed its requirement for 100 percent to hold a masters in research psychology. The remainder of the career areas listed desirable goals for master's degrees. The overwhelming majority required only ten percent of their officers to have a master's degree. Most of the desired master's degrees were in business administration and management.¹³⁰

Within the operations career areas only two, Air Commander and Director Operations, desired 100 percent master's degrees "in all fields of study, business administration with major in management particularly desirable."¹³¹ Forty percent of officers in the "Guided Missile Ops [Operations] Staff" career area needed a business administration master's degrees. Thirty-one other career areas listed a need for 10 percent or less of officers to hold a master's degree, including the Operations Officer career field.¹³²

Identifying current and future educational needs was no easy task. The percentages published seem arbitrary and lack detail. Why, for instance, only one operations officer needed a

master's degree while the next nine could function acceptably without one was not explained. It is not surprising that the AFERB moved away from specific numbers and made recommendations pertaining to the general nature of professionalism.

Analysis of the System

The Professional Education Division of the Air Force Human Resources Laboratory, Air Force Systems Command, conducted an analysis of the system for determining and validating AF professional education requirements in 1971. This was "the first complete description of Air Force procedures for handling educational requirements."¹³³ They found that although the AF used a systems approach to determining and validating educational requirements, it was an encountered, not a designed system.¹³⁴ It did not use uniform criteria for evaluating needs and establishing priorities. Trends indicated an AF need "for increasingly more and higher levels of education with respect to its career officers."¹³⁵ The study found compromises must be made between quantity and quality, between current versus future needs, between PME versus advanced academic and short courses, and between formal education and experience.

One result appears to be a dispersion of the decision-making function wherein requirements are passed from one level to another in the search for an agency possessing the information or determination necessary to make a positive (accept or reject) recommendation or decision.¹³⁶

The study found that "There is not an apparent mechanism or systematic process for identifying and evaluating future requirements that are not extrapolations of current requirements or experience."¹³⁷ The study noted that objective measurement of inputs and outputs of this systems model are limited by "the current state of educational systems technology wherein behavioral requirements are not generally translatable into simple educational equivalencies."¹³⁸ The study found, paralleling the findings of the academic community as a whole, that there was low correlation between professional educational attainment and occupational performance. This condition "does not appear to warrant the rigid selection procedures currently employed."¹³⁹

The primary objective of the professional education system, the study found, is to produce officer personnel possessing professional skills, knowledge and attributes necessary for current

and future operational requirements. Within this context advanced academic education's purpose was "to provide full qualification in particular professional fields. . . ." ¹⁴⁰ However, the selection process did not provide guidance as to the specific educational objectives to be achieved and the major types of educational programs attended by an officer during his career were not systematically integrated. ¹⁴¹ This selection process employed a formal system, and an informal system relying on personal contacts. The latter was used in lieu of the formal system and was not available to all candidates. However, the major determinant for advanced academic course selection was the candidate's military performance record, not academic performance record. ¹⁴²

After determining what educational program was needed, and who would attend the program, there still remained the question of where to send the officer, or which school to use.

This determination involves several considerations: One, an attempt is made to insure enrollment of the best qualified students in the more prestigious universities. Two, it is generally desirable, from an overall cost standpoint, that the resident programs be filled before recourse is made to civilian schools. Third, it is desirable that the resident schools maintain high academic standards. The result is . . . that the best students are sent to high prestige schools and the borderline candidates sent to civilian schools having less rigorous academic standards. ¹⁴³

The system to establish academic degree education requirements that had developed by 1971 may have had some flaws. Although AU was the education command, the person ultimately responsible for determining the educational requirements for the AF was the Director of Personnel Planning. Individuals with personal contacts may have had an advantage in the selection process. However, advanced academic schooling was not available to all officers.

Air Staff Procedures

The use of the AFERB to determine future needs fell from practice for several years, not reconstituting until the summer of 1969 when it reconvened to determine specifics relating to advanced degree requirements. ¹⁴⁴ The new automated electronic data processing system the Air Force adopted in the early 1960's gave planners a powerful tool. The education level of each officer was included in an automated data base. Thus, the ability to inventory the stock of officers with education in each of nine general areas of study, match those officers to requirements, and

predict future requirements was enhanced.¹⁴⁵ By 1966 the Board method had been replaced by staff procedures which used the new Air Force Specialty Code (AFSC) in a two phase process to determine advanced degree requirements. First, the Air Staff and major commands were to survey all relevant positions and submit requirements to the Deputy Chief of Staff for Personnel, who consolidated them by functional areas. Then, each Air Staff agency would review the AFSCs for which it had functional responsibility, make a five year projection and compare that projection with the current inventory.¹⁴⁶ This process determined that in 1966 "only a few of the highly technical Air Force Specialty Codes have a mandatory minimum requirement of a bachelor's or a master's degree."¹⁴⁷

AFI 36-2302

Air Force Instruction (AFI) 36-2302, Professional Development, states the policies of the Graduate Education Program, for Professional Continuing Education, and for Fellowships, Scholarships, and Grants in 1995. The concept of the Graduate Education Program was to provide for a limited number of officers to receive graduate education through AFIT to meet critical requirements.¹⁴⁸ These requirements were for line officer positions specifically necessitating an advanced academic degree to perform the job. Graduates of the program must be assigned to the billet within two tours following graduation.¹⁴⁹ Most assignments in fact did occur in the first year after graduation, and first year assignment percentages were increasing. For example, first year assignment in fiscal year 1986 for the class of 1985 was 42 percent. By 1994 the first year assignment rate had increased to 56 percent.¹⁵⁰ This program was not designed to advance the general academic education level of the officer corps. Since its inception it has been a narrowly focused program.

Professional Continuing Education was designed "to meet requirements for specialized knowledge needed to improve the performance of personnel in their present duties or to prepare them to assume greater responsibilities."¹⁵¹ The concept of the program was to provide instruction in short courses (less than 20 weeks) to meet specific skills requirements in designated career fields.¹⁵²

The objective of the Fellowships, Scholarships, and Grants program was to provide AFIT sponsorship to allow officers and cadets to take advantage of certain eligible fellowships, scholarships and grants. There is no explanation in the AFI as to why the AF would desire to extend sponsorship. The recipient of the award must be the winner of a competition, and would be assigned using the same post education assignment guidance for the Graduate Education program.¹⁵³ The program would allow for officers to follow prestigious avenues for academic advancement. The AF would reap some benefit as well. By creating the same utilization policy which it employs for graduate education programs, without incurring the full cost of the education, the advantage to the AF is obvious.

Summary

These three programs describe the mechanism by which the AF allowed an extremely limited number of officers to pursue advanced degree education. The degrees they obtained were in areas identified by staff procedures, which were established to meet critical requirements in specific disciplines. Apart from the early goal to establish an undergraduate degree as a requisite for a commission, the education command appeared to have very little, if anything, to do with establishing or determining what the AF's educational requirements were.

Did USAFA have a role in emphasizing degree-granting education?

Reasons USAFA was Established

One of the earliest milestones in the establishment of the United States Air Force Academy (USAFA) was the Report of the Stearns Board. Appointed by the Secretary of Defense in 1949 and chaired by the President of the University of Colorado, Dr. Robert Stearns, the Board's recommendations were a cornerstone of the Department of Defense position supporting the establishment of USAFA. A new, separate academy was required because present facilities were inadequate to provide the number of Air Force officers required, and the other services academies could not provide for the special training requirements of AF cadets.¹⁵⁴ Additionally, there was a need to indoctrinate a new cadet early in his career in the traditions and esprit of his

own service.¹⁵⁵ There was also the issue of equity among the services. The Senate Report accompanying the authorizing legislation stated, "The Air Force Academy will provide for the Air Force an institution comparable to the United States Military Academy . . . and to the United States Naval Academy."¹⁵⁶ The Academy would provide a stable source of career motivated officers and "would serve to raise the educational level of Air Force Regular Officers."¹⁵⁷ In justification the Assistant Secretary of Defense, Roger Kent, stated:

The principal sources of career personnel for the Air Force in the past have been the aviation cadet program, the Air Force Reserve Officers' Training Corps. and officer candidate schools, which are presently unable to provide the full number of career officers with the educational qualifications required by the Air Force. Nor is it desirable that the total requirements be met from those sources.¹⁵⁸

The shortage of officers with desirable qualifications demanded an increase in the number of accessions. The options to expand present sources were repudiated based on educational requirements and aspirations to establish traditions comparable to the other services. There is little doubt that the USAFA was established in part to elevate the general educational level of the AF officer corps. The Stearns Board also addressed the educational philosophy USAFA should adopt.

Educational Philosophy

According to Lieutenant General Thomas S. Moorman Superintendent of USAFA, the objectives were established by the Stearns Board recommendations of 1949:

The service academies should develop in the student the capacity for clear analytical thought and of carrying it to a logical conclusion. The need is for initiative and above all, for judgment and common sense. The complexity of the arts and techniques of modern war and the degree to which the conditions to be met are unforeseeable all emphasize the necessity for such qualities as a leader.¹⁵⁹

USAFA's Dean Brigadier General Robert F. McDermott explained the whole man philosophy behind the large general education curriculum was "the intellectual preparation of the cadets as a man and as a citizen, through courses in the liberal arts and sciences, which are focused on the study of nature, the study of man and the study of society."¹⁶⁰ This broad educational emphasis was again justified by a Stearns Board passage:

Professional military knowledge alone will not suffice to solve the problems of modern war. In the last war, officers of the armed services often became engaged in pursuits other than purely military which required a general educational background. Graduates of the Service Academies as they progress to positions of high responsibility in the military establishment will have an increasing range of contacts among leaders in civilian life, both at home and abroad. The complexities of modern war require large numbers of officers to undertake postgraduate studies. The Board, therefore, considers it essential that a graduate of a Service Academy should have a background of knowledge comparable to that possessed by graduates of leading universities. His field of knowledge, therefore, should include the arts and sciences in addition to professional military subjects.¹⁶¹

The Stearns Board passage indicates that the desirable education pattern of the service academies should parallel degree education offered in civilian institutions. USAFA was able to demonstrate that, at least for some of its graduates, it was imparting the type of education envisioned by the Stearns Board. General McDermott pointed to the success of graduates in scholarships and fellowships as evidence of the success of the institution in its mission. These included Rhodes Scholars, Guggenheim Fellows, National Science Foundation Fellowships, and Fulbright Scholarship recipients.¹⁶²

When General McDermott wrote of these accomplishments USAFA had not existed long enough to produce graduates with distinguished military careers. In the absence of military success, the measure of success of the institution relied on the degree of academic success its graduates achieved. An element of that success was captured by participation in prestigious scholarship and fellowship programs, which imparted legitimacy and prestige to the institution, the officer corps and the Air Force.

Summary

USAFA was established with an emphasis on degree education. It was conceived to provide the AF with its own commissioning source comparable to the older services and it was conceived as an institution which would elevate the general education level of the officer corps. This degree education was to enable its graduates to be leaders as well as articulate representatives of the AF.

What was the emphasis of the 1978 merger of AU and ATC?

Opposed Previously

The first major change in the education command structure was the decision to place AU under Air Training Command, effective in May of 1978.¹⁶³ This arrangement lasted until 1983 when "USAF leaders decided again to draw a clear distinction between education and training, reintroducing a major air command structure to administer each."¹⁶⁴ The pressures created by the Korean Conflict had nearly resulted in the demise of AU in 1950.¹⁶⁵ Again in 1964 there was a serious effort to reconfigure the command architecture by subordinating AU to another major command. In arguing against the change AU offered the rationale:

Such a merger would have adversely affected the overall prestige of the Air Force's professional school. . . . More importantly, the Air Force's PME schools and colleges would have been placed considerably lower organizationally than the corresponding schools and colleges of the other services. Above all, AU would lose the separate command and mission identity it currently had.¹⁶⁶

In light of AU's previously staunch opposition to any change which resulted in a derogation of their status, it was surprising that in 1974 the AU commander, Lieutenant General Felix Michael Rogers, suggested amalgamating Air Training Command, Military Personnel Command and AU.¹⁶⁷ This idea expired with the commander's reassignment.

The announcement in 1978 that AU was to be placed "under ATC struck without warning or notice. Neither AU nor ATC were involved in the final decision."¹⁶⁸ Reasons cited for the merger included managerial efficiencies, cost savings, the consolidation of officer accession programs (AFROTC and OTS), and increased clout at the Air Staff and Pentagon due to representation by a four star general.¹⁶⁹

Although AU leadership had opened the door to the merger in 1974, the history of AU indicates they welcomed the divorce in 1983 substantially more than the merger in 1978.

Impact on Prestige

Difficulties with the command arrangement surfaced immediately. The commander of ATC formulated education policy, "but the task of finding resources and support would fall to the AU commander."¹⁷⁰ The 1978 history of Air University forecast another problem:

In the civilian academic community, Air University had acquired a unique and increasingly prominent position among top educational institutions. Recognized by many leading educationalists as a quality institution, Air University had worked very closely with these institutions to a mutual advantage. . . . This position was of inestimable value to the Air Force politically and from the viewpoint of public relations. It was difficult to imagine that this status was enhanced in any way by the realignment.¹⁷¹

Indeed, when the two major commands were divorced five years later on 1 July 1983 rationale included the belief that "the visibility of professional military education (PME) had been reduced and reestablishing AU as a major command would give PME the necessary exposure."¹⁷²

Loss of AFROTC Program

In contrast to the AU-ATC merger, the consolidation of AFROTC and OTS was viewed as a success; after 1983 these programs remained with ATC.¹⁷³ There were compelling reasons for this command relationship, but a significant argument against the arrangement rested in the perceptions of the civilian academic community:

Air University was viewed by the civilian education community as a "university" with the attendant prestige, image and responsibilities. Air University doubted whether a staff agency could appropriately convey that flavor and image. The benefits derived from AFROTC's association with AU's educational mission . . . would be lost if AFROTC reported directly to the staff agency.¹⁷⁴

Report directly to ATC it did. The commander of AU was again proposing to re-acquire authority over the AFROTC program in 1987, not because the operating organization was not working, but because AFROTC was an educational, not a training, program.¹⁷⁵

Summary

In the merger and subsequent divorce of the two commands there is little data to suggest degree-granting education received any direct emphasis. The major concern to AU in the merger was the loss of prestige, both in the civilian academic community and in the PME community of the sister services. Rationale for command relationships and organization continued to be constructed based upon the definition of education and of training, however, the rationale was not adhered to religiously.

What was the emphasis of the 1993 merger?

Year of Training Initiatives

The second major educational restructuring occurred on 1 July 1993 when Air Education and Training Command (AETC) was activated. This command reorganization was one of the first results of USAF Chief of Staff General Merrill A. McPeak's "Year of Training."¹⁷⁶ The term "The Year of Training" was coined by the Chief of Staff as a device to concentrate his attention on specific functions in a three year review and restructuring effort modeled on the mission of the Air Force, to organize, train and equip forces.¹⁷⁷ Part of the purpose of the review of training was to examine the objectives of the various programs, distinguish between education and training, and examine the command structure.¹⁷⁸ The objective was "to build a coherent education and training architecture and to raise our standards for education and training to meet the demands of the next century."¹⁷⁹ Much of the effort spent in the review focused on the enlisted force.¹⁸⁰

The reorganization was intended to create a synergy between education and training, to create leaders with more balance between know-how and supervisory and leadership skills.¹⁸¹ Most of the discussion pertaining to reorganization "focused on flying training and other [training] issues."¹⁸² AU's historical opposition to subordination continued. It was believed by most of the other senior AF generals gathered to discuss the issue that the commander of AU was expressing "ill-founded" concern in opposing the merger. AU's commander was specifically concerned that they not be "repeating the mistakes of the previous merger."¹⁸³

General Henry Viccellio, Jr., first commander of AETC, tasked his new command to complete training and education roadmaps to tie together skill ratings, grade, education, and qualifications, to define what was needed in professional development, and when it was needed.¹⁸⁴ By 1995 the Secretary of the Air Force Shelia E. Widnall believed this task had been completed, and "opportunities for professional growth [had] been clarified and expanded. Year of Training initiatives resulted in life-cycle education and training objectives that reduce uncertainties concerning requirements for advancement."¹⁸⁵ Though not specifically stated, the Secretary was

clearly referring to academic degree education. She believed the ambiguity in requirements had been largely resolved.

Benefits and Results

General McPeak explained the advantages of the new command architecture in a speech to the Air Force Association in early 1993:

Putting Air University under AETC will improve our organization in two ways. First, it will continue the move toward fewer commands. We started with 13; last year we cut to 10. Merging ATC and AU into AETC will put us at nine. . . .

The second advantage to AETC is that it gives us one commander responsible for the entire education and training effort. Education and training are not identical functions. In a sense, education teaches people how to *think*, while training teaches people how to *do*. . . .

But education and training are close enough that one individual should be in charge of both—to make resource trade-offs when necessary and to make sure training and education complement each other. And all of our education and training institutions will benefit by having a four-star advocate for their resource needs.¹⁸⁶

The General's comments suggest that a dominant influence in the reorganization is simply the downsizing of the Air Force, that by definition, smaller is better. The second advantage of the reorganization was the realization of the stated philosophy of organization behind the creation of AU in 1947. In 1993, however, the single command responsible for all education was to be AETC, not AU. Some of the same reasons for the 1978 merger were surfaced again as rationale for the second merger. Similarly, the resource problem identified in the earlier merger was specifically considered.

General McPeak gave careful consideration to the decision to name the new command Air Education and Training Command, instead of Training and Education Command. The significance of this was that it emphasized not that education was more important than training, but that the Air Force was “*not* subordinating education to training.”¹⁸⁷ AETC would consist of two numbered Air Forces plus AU, now designated a major direct reporting unit. The numbered Air Forces were responsible for various training programs.¹⁸⁸ In the new structure AU retained its role as the educational arm of AETC and the AU commander served as the director of education

on the AETC commander's staff.¹⁸⁹ These relationships were meant to solve the earlier resource problems.

The mission statement of Air University is, in part:

Air University conducts professional military education, graduate education and professional continuing education for officers, enlisted personnel and civilians to prepare them for command, staff, leadership and management responsibilities. Specialized and degree-granting programs provide education to meet Air Force requirements in scientific, technological, managerial and other professional areas. Air University is responsible for research in designated fields of aerospace education, leadership and management. It also provides pre-commissioning training, and offers selected courses for enlisted personnel leading to the awarding of select Air Force Specialty credentials.¹⁹⁰

AU retained ownership of the colleges in the PME system and AFIT. It gained responsibility for ROTC among other units. It was now also responsible for training and commissioning second lieutenants, in partnership with USAFA, through the Officer Training School (OTS). AU "educates officer candidates through AFROTC and OTS . . . [a] 13.5 week basic officer training course."¹⁹¹

The intermingling of the terms education and training in AU's mission statement and within the official descriptions of its programs indicate that in addition to its education tasks AU had substantial training obligations in the new command structure.

In the view of General McPeak, education and training are not the same thing, but they share a close enough definition that they benefit from unity of command over the various institutions.¹⁹² The role and mission statement of AETC further emphasizes this, "The synergy of education and training into a career-spanning continuum is one of AETC's special strengths."¹⁹³

Summary

As in the previous reorganization, degree education was not a major emphasis. The merger seemed largely propelled by the downsizing of the AF, just as it was largely motivated by the need to change training programs. However, the positioning of AFROTC under the purview of AU, the establishment of a director of education on the AETC commander's staff occupied by the commander of AU, and the name of the new command indicate this new organization was conceived and created differently than that of 1978. The most dramatic difference was the

emphasis on the spectrum of career development and the synergy between training and education, as opposed to their differences. The result is an organization which is not assigned responsibility for programs and therefore provided resources based on the strict definition of education.

Summary of Command Architecture

The hypothesis that the evolution of the command architecture has emphasized the need for academic degrees is only partially supported. AU was established to separate the responsibility of educating the officer corps from other commands and it initially did not emphasize degree education in its programs. Degree education, however, was needed to establish faculty competency and prestige, but the primary emphasis was on PME, a fundamental educational requirement for the officer corps. AU did attempt on two occasions to integrate degree education into its programs. Largely due to outside influences these efforts were thwarted. It was not until degree-granting authority was obtained for the SAAS program in 1994 that AU achieved a measure of true integration between PME and degree education.

AFIT played an important role in emphasizing degree education because its driving philosophy and its important work in weapons research and development quickly moved it towards accreditation. However, AFIT was designed to fulfill specific degree requirements for specific technical and scientific AF specialties. It was not given the mission of educating the officer corps across the board, and its influence in emphasizing degree education was slight.

USAFA, on the other hand, has emphasized degree education ever since its inception. Although USAFA was established for other reasons as well, raising the general education level of the AF officer corps and ensuring new officers possessed a degree were prime motivating factors. It is the only AF institution in which such clear cut motivation could be identified.

After initially establishing a goal to commission only men with academic degrees, AU was largely uninvolved in establishing degree education requirements. That responsibility fell to a system of education boards, then to staff processes which continue to date.

Policy and Doctrine have emphasized the need for Academic Degrees

This section of the thesis is organized using the questions posed in chapter three relative to the second hypothesis. Each of the six questions are asked, then answered by analyzing the data. The section concludes with a summary of the analysis.

What was the motivation for the earliest educational policies?

As discussed in the previous section, "Who established academic degree education requirements?" the extremely low percentage of AF officers who held any type of degree was a real problem immediately following World War Two. The problem was accentuated by unfavorable comparisons to the older services.

Influencing Factors

There were several reasons for this deficiency in the officers corps. In 1947 some officers believed it was in the nature of those attracted to flight to refrain from the sedentary requirements of academia.¹⁹⁴ AU explained the lack of academic preparation in the officer corps was due to the youth of most of the officers commissioned to meet World War Two requirements. These officers simply did not have the opportunity to complete school as the "war interrupted or prevented . . . higher education."¹⁹⁵ The implication was that the educational requisites for a commission in World War Two were more lenient than the new AF was willing to accept. Many of those acquired who were educated were non-flying specialists who had since returned to civilian life.¹⁹⁶ Major General Fairchild, AU's first commander, indicated the problem was older than World War Two, that there were glaring deficiencies in the prewar Army Air Corps education program.¹⁹⁷ (This source did not identify these deficiencies and the period referred to was outside the limitations of this thesis. The intent is to illustrate that whatever the reasons this was viewed as a problem with origins older than independence.) Later, during the rapid expansion for the Korean Conflict, the Air Force need for additional officers created the only decreases ever recorded in the overall percentage of officers who held baccalaureate degrees.¹⁹⁸

Solutions

The solution to the initial problem with degree education in the officer corps, its paucity, was not to be achieved quickly. The vision provided by AU in establishing the goal of requiring an undergraduate degree for a commission created a unifying objective. This goal recognized that personnel requirements prevented immediate action. The goal also sparked opinionated debate over whether a degree was a necessary component of officership. In 1967 Air Force Regulation 53-7, Schools: Officer Advanced Academic Degree Requirements, stated for the first time, "A baccalaureate degree is now a prerequisite for commissioning new officers."¹⁹⁹ The debate had been settled in the affirmative.

How did academic degree-granting education evolve in basic doctrine?

Doctrine through 1963

Air Force Manual 1-2, United States Air Force Basic Doctrine, was first published in 1953. It contained the Air Force's most fundamental premises regarding air power. Revisions were published in 1954, 1955 and 1959, none of which contained any references to training, education, or professional development.²⁰⁰ The manual changed format and content repeatedly. The absence of relevant discussion in basic doctrine merely reflects that the document itself was evolving, not that education was not a consideration. Until 1963 insight into doctrinal concepts must be obtained from elsewhere.

In 1958 the Commandant of AFIT explained the impact of science on educational requirements. The vast complexity of weapons systems resulted in a situation where no one person could have the detailed knowledge required to ensure their proper functioning. Therein lay the absolute requirement for specialists. However, the leadership and management of those specialists required a generalist:

It seems possible that a baccalaureate degree, even one in the sciences, may not provide a sufficient breadth of understanding of the various scientific disciplines which coalesce in a weapon system. . . . Any educational program designed to meet the needs of the Air Force must be designed to meet the continuing and increasing demands placed upon Air Force leadership. . . . In short our professionalism like all others requires a liberal education . . . not to be found in any undergraduate curriculum. . . . It can only be met by a continuing process of education--self-education.²⁰¹

These statements indicate that the need for an undergraduate degree to ensure an officer possessed the attributes necessary for leadership was a foregone conclusion. These statements also suggest that the AF was anticipating ever greater degree education requirements, not just for specialists and technical career fields, but also for any officer who would presume to be a leader. Finally, it implies that the individual should not look to the AF to bear the burden of ensuring that education was available, it was an individual requirement.

1963 Draft

In 1963 a draft version of the basic doctrine manual was submitted to the Air Force Chief of Staff, General Curtis E. LeMay. This was a significant departure in form and substance from the earlier versions. The draft document discussed at length new topics such as nation building, low intensity conflict, insurgencies and thermonuclear war. It also contained a chapter devoted to the "Development of Combat Capability."²⁰² This, it was proposed, was "the prime function of the military services."²⁰³ The draft stated the key elements in developing combat capability were personnel, facilities and equipment. Addressing personnel, the draft stated that to fulfill the functions assigned to it the AF must train units and individuals. The draft specifically linked training of individuals to the enhancement of professional status, as well as to an advanced scientific personnel selection process.²⁰⁴ The draft was in consonance with AU's education goal:

AN OFFICER CORPS COMPOSED OF INDIVIDUALS WITH THE SPECIALIZED FORMAL EDUCATION AND FLYING TRAINING ESSENTIAL TO THE EFFECTIVE OPERATION OF AEROSPACE FORCES IS REQUIRED.

Major officer procurement programs must be oriented toward selecting officers who have already completed educational programs at the baccalaureate level. Extreme care must be taken to insure that officers possess education in needed specialized areas. This should enable the Air Force to place into its inventory technically educated officers in sufficient numbers to fulfill its graduate level education requirements.²⁰⁵

Although it was not approved, the draft illustrates that at the highest levels in the AF there was significant interest in acquiring officers formally educated in technical fields. It also showed there was significant concern regarding the education of sufficient number of officers at the graduate level. Finally, it was believed that advanced formal education enhanced the status of the profession.

1964 Version of Basic Doctrine

When the approved revision of the Basic Doctrine Manual, renumbered AFM 1-1, was published in 1964, it did not contain the "Development of Combat Capability" chapter. Like the manual it superseded, it did not address training or education.²⁰⁶ This absence only indicates an evolving vision of what basic doctrine should discuss.

1971 and 1975 Versions of Basic Doctrine

After seven years, AFM 1-1 Aerospace Doctrine United States Air Force Basic Doctrine was revised again. The 1971 version still gave no consideration to education or training doctrine.²⁰⁷ These topics were addressed in the next version, published in 1975. For the first time since the 1963 draft in the early sixties people were mentioned relative to doctrine. By this time the AF had achieved the goal established in 1947, baccalaureate education was a requirement for a commission. Doctrine now stated:

2-6. Personnel and Training. Successful accomplishment of the Air Force mission is predicated on the timely availability of trained and motivated people.

a. The USAF Personnel Plan prescribes the Air Force approach to total force personnel management. . . . It also explains the underlying philosophy behind Air Force personnel actions in recruiting, educating, training, utilizing, sustaining, and separating people.²⁰⁸

Although the basic doctrine manual considered people "the heart of all systems and forces,"²⁰⁹ it was a rather insubstantial effort at stating doctrinal guidance. Furthermore, education was addressed strictly in terms of personnel policies. For nearly 30 years basic doctrine had evolved with little emphasis on degree education. When the goal of requiring a baccalaureate education had been achieved, educating the force was a mature process explained in doctrine by reference to appropriate personnel prescriptions.

1979 Version of Basic Doctrine

Four years later, in 1979, United States Air Force Basic Doctrine was completely revised. For the first time it defined education, training and PME in a new section titled "Training and Education."

Education is open ended. It expands the horizons and stimulates the imagination. Knowledge gained from education prepares people to examine the complex, and often uncertain, problems that confront us. We learn that there are not always absolute answers or convenient solutions to these problems. However, by providing a broad educational experience to our people, we gain the potential for innovative and imaginative thinking that is needed to maintain a strong, effective Air Force.²¹⁰

The manual defines training in three categories: military, technical, and operational. It also discusses the purpose of PME. "This education emphasizes military science, promotes an understanding of the elements of strategic and tactical operations and provides an in depth view of the role of the military in a democratic society."²¹¹ Academic education is also specifically addressed:

For the Air Force to operate at its highest effectiveness some of our leaders and managers must be sent to civilian universities to study one or another of the professional disciplines not normally taught in military schools. These include engineering, the natural and social sciences and the humanities. This education provides interface between the civilian and military communities. Education assists in the shaping of our attitudes, outlook and the stimulation of an individual's imagination.²¹²

This version of United States Air Force Basic Doctrine devoted considerable effort to codifying the independence of the elements of the AF training and education system. It implies that the AF can operate at its highest effectiveness with only some of its senior officers interfacing with the civilian academic community. The absence of an education program available from an in house institution provides the impetus for the interface. This implication is in consonance with the historical exclusiveness of the AF educational program.

1984 Version of Basic Doctrine

The next revision in 1984 did much to blur the distinctions established in 1979. The references to academic education were deleted entirely, and education was addressed as an element of training. "This dictates that training is a force-wide, continuous process of applying education, skills, and experience to the goal of producing a credible, cohesive warfighting team."²¹³ Education was also linked to the concepts of high standards and commitment:

These two elements, education and training, enhance the competence of our personnel by broadening their perspectives, expanding their knowledge of war, and by preparing themselves to assume leadership positions of increasing scope and responsibility. Thus, education and training comprise a continuum that does not begin or end with formal

programs. They are inseparable elements of a continuous process that inspires commitment, both individually and as a team, to the mission of the Air Force.

If education and training are to foster commitment and team spirit, they must also establish high standards of performance. . . . [The] Air Force institutionalizes its high standards. . . . Air Force forces meeting these standards establish an important measure of confidence, both internally and externally, that they can fight and win. . . . It is important that this commitment to excellence pervades the entire Air Force.²¹⁴

In addition to avoiding the traditional AF division between education and training the new doctrinal statements revealed an expectation of personal effort beyond the formal programs of the AF system. This version was published the year following the re-establishment of AU as a separate command. Education and training were not perceived as absolutely separate processes. By 1980 ninety-nine percent of AF officers held an undergraduate degree. High standards of formal education programs necessarily meant advanced degree education. In light of the absence of discussion of academic education, evident in the superseded version, and the expectation of individual commitment to education to establish external confidence in the Air Force, the implication is that this is one role advanced degree education must fill. Furthermore, if the desire that high standards and a commitment to excellence pervade the entire AF related to degree education, then the implication was an expectation of universal advanced academic education, beyond the minimum level. This was because every officer in the AF already had achieved the minimum standard.

1992 Version of Basic Doctrine

Once again Air Force Manual 1-1, Basic Aerospace Doctrine of the United States Air Force, was completely rewritten, the latest version published in 1992 and signed by General McPeak. This version was divided into two volumes, the first consisting of "bare bones" statements in quick-reference form, and the second a volume of evidence and supporting rationale in essays.²¹⁵ This version of the manual is by far the most detailed effort to establish basic doctrine for education and training. Once again, education is addressed under the rubric of training the force:

Air Force personnel must be encouraged to develop professionally to the full extent of their capabilities and allowed sufficient time to pursue that development. Full professional development requires a balance of training, education, experience, and personal effort.²¹⁶

The individual commitment to excellence of the superseded version had become the codified requirement for personal effort. Other bare bones statements indicated that PME "should encourage critical analytical thought, innovative problem solving, and sound professional judgment," and that:

Every airman, of whatever rank, should be personally committed to making maximum use of training, education, and experience opportunities. Each individual must take the initiative to learn and understand as much as possible about the complexities of warfare. Such personal effort is the mark of the professional and is the key to the success of any Air Force professional development program.²¹⁷

According to doctrine, to be successful in professional development one must show himself, mark himself, as a professional through demonstrated personal effort.

The supporting essay for all of these statements in volume two of the manual is "Training the Air Force: The Four Components." The four components of the title are clearly identified: training, PME, operational experience, and personal effort.²¹⁸ The essay defines training as "instruction to impart knowledge, to provide . . . the correct solutions to specific problems."²¹⁹ Air Force PME is generally described as the resident schools or a nonresident option involving "correspondence and self-study."²²⁰ In addressing the second component the manual acknowledges the veracity of Lieutenant General William R. Richardson's remarks in Military Review in 1984. The commander of the Army's Training and Doctrine Command stated:

A generation of officers was taught that the study of leadership, tactics, strategy and military history was an embellishment rather than the proper focus of military education . . . *officers have wrongly been taught that technology is more important on the battlefield than tactics.* . . . But the crux of the problem was that our schools were not teaching officers how to think, plan and decide. Today we *must emphasize how to think* rather than what to think.²²¹

The AF added the emphasis to the General's remarks. The AF was emphasizing that it had made mistakes in the professional development of its officers. The methods of PME were changing. The basic doctrine manual also contains a supporting quote from Major General Muir S. Fairchild to AU's Board of Visitors in 1946:

Whether a man has gone very far in higher education is not too important, as long as he is a simple buck pilot. But when he gets to a position of greater age, rank and responsibility, those deficiencies [created by the lack of a sound professional education] are apt to show up markedly, resulting in a more or less mediocre senior officer level.²²²

The manual attributes the preceding statement to a discussion of professional education and uses it as supporting evidence for the value of PME. However, the conditions prompting the concern of Major General Fairchild in 1946 regarding higher education was the widespread lack of college educated officers. These two quotes indicate that doctrinally PME had absorbed some of the historical characteristics of the more traditional degree education. The rationale for the AF's emphasis on college education in 1947 had been appropriated to emphasize PME in 1992.

Experience, the third component of professional development, is related to the "practical, daily world of military units" where we learn by doing. Capitalizing on experience "depends a great deal on personal effort and commitment."²²³ The fourth component, personal effort, "makes professionals and is the most important element in any successful professional development program."²²⁴

The conclusion of the essay links each component of professional development to an objective.

Air Force professional development should have three objectives. First, it should increase professional's qualifications and abilities to perform assigned duties. Next, it should prepare them for future leadership and supervisory challenges. Third, it should help identify the "best qualified" for higher grades and responsibilities. Formal training and guidance are primary tools in molding airmen for the first objective. PME is the basic tool for the second goal. Experience undergrids training and education and is basic to the whole process. The third objective results as training, education, experience, and personal effort combine to mark the best qualified. Personal effort and commitment link the other three components of professional development.²²⁵

The first two components, training and PME, are clearly linked to specific objectives. The link between the second two components, experience and personal effort, is not quite so unambiguous. It is impossible to imagine achieving any objective without personal effort on the part of those involved. Until one considers the evolution of the concept of commitment to excellence and the doctrinal requirement to mark, or distinguish, one officer from another, it seems an unnecessary observation of the obvious for a doctrinal statement.

Traditional education, represented by an academic degree program, was not specifically addressed as supporting any of the objectives, not even the first objective of increasing an officer's professional qualifications or ability to perform assigned duties. PME prepares one for leadership and is one of the marks of a "best qualified" officer. The 1992 version of basic doctrine places a great emphasis on identifying a commitment to professionalism through personal effort. These doctrinal statements do not emphasize degree-granting education. They emphasize training, PME and personal effort. While not discussing degree-granting education, the statements create an obvious role for it.

Summary

In examining the evolution of AF basic doctrine relative to academic degree education, it was discovered that for the first 16 years the issue was not even a consideration. The issue was tentatively raised in a draft version of the manual, and 10 years later became an official doctrinal concern, differing in subsequent versions but never diminishing. From the earliest statements of doctrine, though not in the official manuals, there has been a consistent thought. That is, there is an individual responsibility in the pursuit of professional development, and that education is part of the pursuit. That thought has evolved into the idea that advanced degree education is a useful tool in establishing the personal commitment of an officer to the ideals of AF professionalism. Doctrine in 1992 emphasizes degree education by establishing the demonstration of personal commitment as an oath of allegiance.

Did policy support the education goal established in 1947?

Accession Sources and Education Requirements

The 1952 version of AFR 36-5, Appointment of Officers in the Regular Air Force, commissioning requirements emphasized engineering and management education. The regulation stated that applicants needed a minimum of 60 semester-hours toward a baccalaureate degree or successfully completed the college level General Educational Development Test, and "Although not required, a baccalaureate degree is desirable, particularly in the fields of engineering, the basic

sciences, or management and its related fields.”²²⁶ By 1959 the semester-hour requirement was dropped, as was the exception allowing the test method of obtaining eligibility. Instead, the requirement now read:

New and changing requirements dictate that only young men with great potential be selected for Regular officer appointment. Priority for selection will be given to individuals who possess a degree in engineering, the basic sciences, management, or related fields, consistent with Air Force requirements²²⁷

The regulation changed again in 1961, still emphasizing the same types of degrees but now including the goal articulated in 1947.

The goal of the Air Force is to attain a Regular officer force completely educated at least to the baccalaureate degree level. Therefore, priority for selection will be given to individuals who graduated from duly accredited colleges and universities with degrees in engineering, the basic sciences, management, or related fields consistent with Air Force requirements as outlined in separate Headquarters USAF instructions.²²⁸

Although it had been possible to become a commissioned officer without reference to formal education Air Force policy was moving towards making that an impossibility.²²⁹ During the course of the first 15 years after independence there was an obvious increasingly restrictive trend in defining the educational qualifications required of new officers.

In 1959 the Air Force had several sources of officers, each targeted at a slightly different demographic. The Preflight Training School took unmarried civilians and airmen with less than six months of service and processed them through officer training for eventual attendance at undergraduate pilot training. These men averaged 1.5 years of college.²³⁰ The average Officer Candidate School student was 26 years old, a technical sergeant with six years of service and with approximately two years of college-level work, and was married with two children. Selection criteria included a high school diploma or GED equivalent.²³¹ Of course some officers were commissioned from the service academies, including the newly established Air Force Academy. The Reserve Officer Training Corps was the largest single source of officers. These final two sources resulted in an officer with a baccalaureate degree.

Two new programs were begun in 1959, Officer Training School (OTS) and Airman Education and Commissioning Program (AECp). OTS was designed as a supplement to ROTC.

Applicants were required to be college graduates. OTS was directed towards men with college degrees who possessed needed Air Force skills and specialties.²³² AECF was established by the Secretary of the AF for "those airmen who have completed two years toward a college degree, who want to complete their education, and who want an Air Force Commission."²³³ The Air Force would send them to an AFIT civilian program for a maximum of 24 months to obtain a degree in some scientific or technical area which met an Air Force educational requirement, then they were to complete their training at OTS.²³⁴

The only two sources which allowed a commission to active duty without a degree were OCS and the Pre-Flight (Aviation Cadet) programs, which were eliminated in the early 1960s. Still, in 1964, 42 percent of the officer population had received their commission through the Aviation Cadet program.²³⁵ By 1964 the AF was not procuring officers through any program unless they had a degree, except in very small numbers in navigator training.²³⁶

Although a baccalaureate degree was not a specific requirement for commissioning, none of the major sources for officer procurement allowed otherwise. The AF gradually tightened the regulations, reduced the number of exceptions, eliminated programs which produced officers without the stated minimum goal and created new programs to maintain the necessary force structure. Emphasis was on obtaining engineers and scientists, but not to the exclusion of liberal arts degrees. Throughout this time period AF accession policy was definitely emphasizing degree education.

Programs to Support Education

The 1947 program for undergraduate college education in civilian institutions for Air Corps officers existed for two requirements:

- (1) To provide a sufficient flow of qualified officers to meet the graduate-college-level training program.
- (2) To meet specific requirements of the service in areas appropriate to undergraduate curricula.²³⁷

Programs were offered in ten areas, predominately technical or engineering. Eligibility requirements included a high school education or the equivalent, and certain age restrictions.

"Graduates of the National War College, Industrial College of the Armed Forces, Armed Forces Staff College, or Air War College [were] not eligible for undergraduate training."²³⁸

The purpose of the graduate training of AAF Officers in civilian educational institutions was to meet the need for limited number of officers in scientific and professional fields. Training at the graduate-college level was provided in administration and education, applied science, and pure science fields of education.²³⁹

These two programs were united under the administration of AFIT in 1949. Policies pertaining to these programs included the provisions that:

No training will be conducted for the sole purpose of raising the educational level of or obtaining degrees for Air Force personnel.

Training available at service schools will not be accomplished within civilian institutions.

Personnel will not be authorized to attend civilian institutions full time at their own expense while on an active duty status nor will special leave be granted for this purpose.²⁴⁰

Eligibility restrictions included attendance at the Air War College, Industrial College of the Armed Forces, or National War College for the undergraduate programs, as well as age and rank requirements.²⁴¹ The emphasis of these programs was to fill specific needs of the AF for particular specialties. The restrictions imposed ensured these programs were not the mechanism by which the officer corps tackled the early general deficiencies in its overall education level.

In 1949 the Air Force Information and Education Program existed in order to improve the educational level of the AF and maintain a high state of morale by providing education information, facilities and services in all echelons of command.²⁴² Objectives of the program included assisting "Air Force personnel to meet the educational requirements for career advancement . . .", assisting them in employing their leisure time profitably, and fulfilling the educational requirements for AFIT academic training.²⁴³ The major onus of support rested with the base commander.²⁴⁴ A detailed discussion of this low level program is outside the realm of this thesis. However, it is apparent that the program expected personal commitment of effort during

off-duty hours to help fulfill AF educational needs, and in that respect it foreshadowed emerging doctrine.

The Air Force also used the services of the US Armed Forces Institute Educational Agency (USAFI). The agency was operated at the joint level and provided "the finest opportunity for voluntary educational analysis and improvement that has ever been available to military personnel."²⁴⁵ The program offered over 6000 university courses through 54 civilian colleges which were attended on a voluntary, off-duty basis. By contractual agreement, the USAF would pay tuition costs in nearby schools, though much of the work was accomplished through correspondence. USAFI did not grant credit, yet assisted in applying for credit, at college as well as at high school level, from civilian institutions for academic work or military training accomplished.²⁴⁶

Summary

Accession programs were gradually modified to eliminate sources of officers which allowed men without a baccalaureate degree to obtain a commission. The AF developed limited programs to fill specific educational requirements, not to raise general education levels. The AF developed off-duty education programs to achieve the goal of raising the general level of the officer corps education, through personal effort on the officer's own time.

How was degree-granting education integrated into career guidance?

Air Officer's Guide

The Air Officer's Guide, in which guidance was "drawn from official publication of the Department of the Air Force, briefed and summarized so as to present information of special interest to officers"²⁴⁷ indicated in its first six editions (from 1948 through 1952) that attendance at schools was of increasing importance in the postwar educational system. The guide suggested the opportunity to complete extension courses offered through correspondence should be embraced by those officers without a degree and it also described the AF's career plan.²⁴⁸ The officer career profile indicated that a minimum of two years and a maximum of four years should

be spent in formal schooling, for both rated and non-rated career fields.²⁴⁹ In 1948 men were counseled that since the duty day was usually less than eight hours, self-improvement during non-duty hours "will be of great aid to the ambitious officer."²⁵⁰ A planned reading program was one type of self-improvement recommended. The 1955 edition interpreted the Air Force position differently. "To assume the leadership role effectively, the manager must fill . . . [certain] requisites. He must be willing to pay the price of personal development and undertake the necessary reading and study."²⁵¹

The Air Officer's Guide had always advised young officers to work for self-improvement. However, in the 1962 edition this advice was specifically addressed in a new section on self-education. "Self-improvement and study must be a part of the program for any officer who aspires to high success. Attendance at schools and performing the required duties of an assignment is not enough."²⁵² In 1967 officers in the operations career fields were told if they did not have a bachelors degree they should get one quickly, and then obtain a graduate degree by the end of the broadening phase in their career.²⁵³ This edition summarized the position of the AF on professionalism in a new section on the subject. An AF officer "must steadily increase his professional competence through expanding his own knowledge. This means taking every opportunity to enhance educational levels, up-grading basic educational degrees to Master or Doctorate."²⁵⁴

This source, reflecting official AF policy, indicated a need for continuous self-improvement. Education pursued during off-duty time at first merely identified ambitious officers who were superior to their peers. Soon it became a requirement for success, then it became a requirement for professionalism. It is noteworthy that this final evolutionary step took place the year the AF achieved its education goal of mandatory baccalaureate education for new officers.

Planned Program of Education in 1947

In 1947, Major General Schlatter, Deputy Commanding General (Education), Air University, summed up "the purpose of our system of training and education by saying that it

exists to provide the Air Force at the proper time with the correct number of adequately prepared officers to operate, control and maintain the increasingly complicated machinery of air warfare."²⁵⁵ He stated the AF had a planned program of education "designed to carry a man through his entire career as an officer."²⁵⁶ That educational program was divided into four phases. the length of each varied by career field and could overlap somewhat. In the primary phase, lasting from commissioning through the fourth year of service, officers would enter either a tactical career track or a technical career track. Tactical officers would attend the AAF Tactical School, while the technical track officers would attend technical and service courses in selected civilian educational institutions. A few officers would be able to attend both. Phase two, the basic phase, would last from the fourth through the twelfth year. Tactical officers would attend Air Command and General Staff School and technical officers would attend the Air Institute of Technology. Sixty percent of officers would attend one or the other and a few of the technical officers would be able to attend the staff school. These would be the officer-scientist. Phase three would be from the tenth through the sixteenth year, and the tactical and technical career paths would combine with a limited number of each going to the Air War College. Finally, phase four would take the most promising officers through joint schools at the national level. For every seven years in service the officer was expected to spend one year in school. By the sixteenth year he would have completed three phases and still have twenty more years of service remaining for the AF to extract the benefits of this educational investment.²⁵⁷

Schools with degree-granting programs had a role in the precommissioning phase, and notably thereafter for the technical career track officers. "Integrated into the over-all scheme of education are special courses in over 100 colleges of the country, both undergraduate and post-graduate."²⁵⁸ Figure 2 indicates that these courses were not in the direct path which linked new officers to the highest level of the educational system envisioned in 1947. In fact, the path to attend these selected courses in civilian institutions was not indicated at all.

AFIT was recognized as the focus for expanding technological education in the Air Force, but the courses offered there should be "broad and fundamental" and graduates were to then be

sent to civilian educational institutions for advanced and specialized study.²⁵⁹ This was partly due to the fact that at the time AFIT was not accredited. Operations and operational services career track officers were absent from the list of those destined for civilian education. These tactical track officers did have the opportunity to cross flow into other career channels, such as acquisition, if they chose to leave the tactical track.²⁶⁰

The system envisaged in 1947 considered a career to be over 30 years long. It also established a split culture in the education of tactical officers and technical officers. Furthermore, it limited the program of education by excluding the possibility of universal educational advancement. The 1947 system did not intend PME nor civilian degree education for every officer.

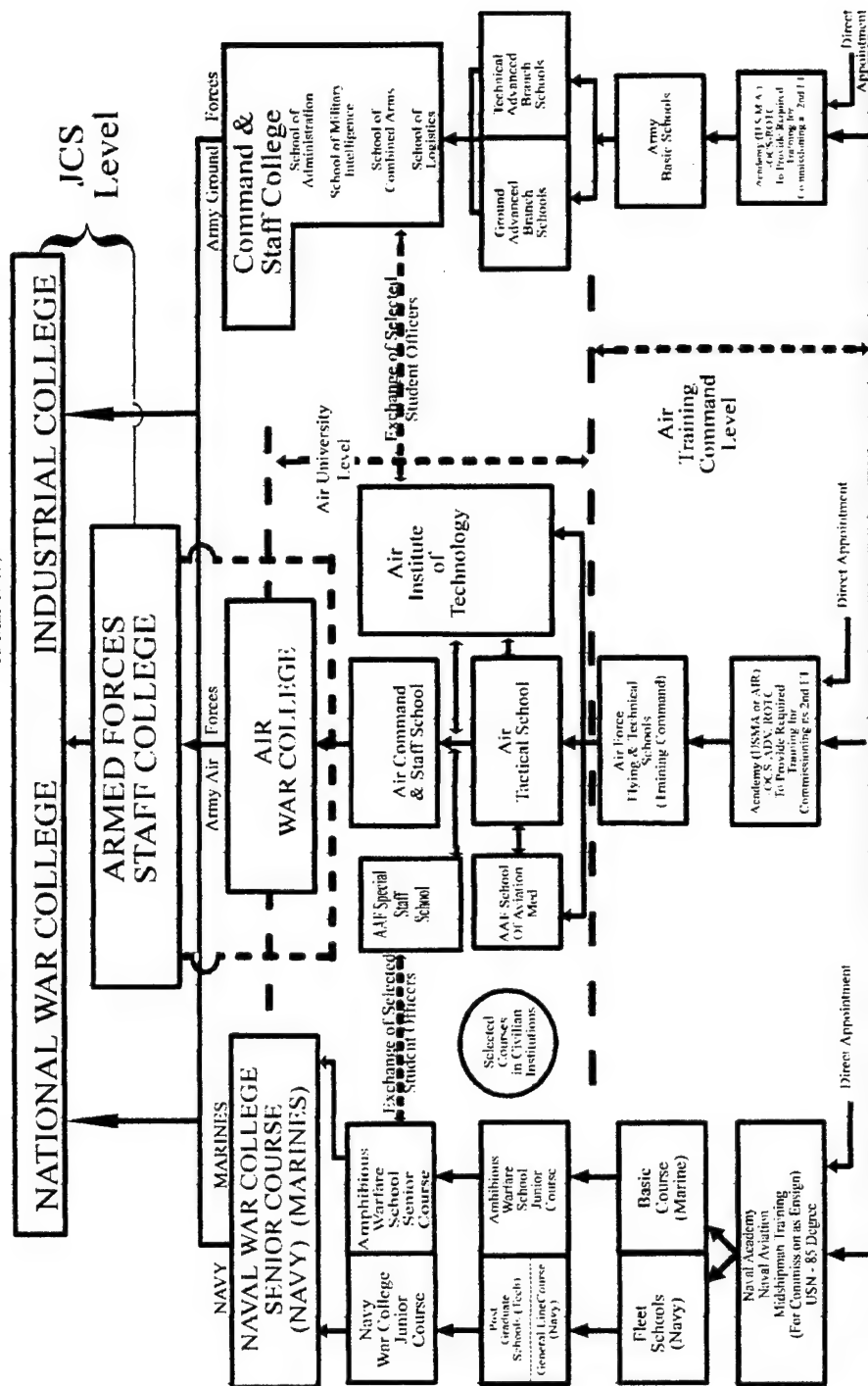
Desirable Education and Training Pattern of 1959

The Power Board assessed that the "Desirable Education and Training Pattern", published in AFR 36-23, Officer Career Management Program, was a sound plan "for the development of professionally competent officers of the future."²⁶¹ Policies governing the pattern included:

- A. An officer should be trained for a job and educated for a career.
- B. The more outstanding officers should be selected for schools in view of the limitations on the numbers that may attend.
- C. An officer should complete the education and training indicated as early as possible in his career.
- D. Officer education, training, and utilization, based upon this pattern, should be consistent with AFR 36-23, Officer Career Management Program.²⁶²

This pattern again emphasized the AF goal that a baccalaureate was the desirable entry level education.²⁶³ A senior lieutenant "should determine if he needs additional College Type Education and when and how to obtain it."²⁶⁴ One of the options listed for college type education was AFIT's Training with Industry program. These programs did not result in a degree being awarded.²⁶⁵ College type education was addressed again for captains, indicating either a broadening or specializing purpose. "Some officers may have to complete undergraduate education, while others should begin graduate College Type Education to prepare for staff level specialties and advanced responsibilities."²⁶⁶ In the pattern "college type education" was not

AAF EDUCATIONAL SYSTEM COMPARED
WITH THE EDUCATIONAL SYSTEMS OF THE ARMY GROUND FORCES AND THE NAVY
10 Mar 1947)



Elementary R.O.T.C. Proposed as Standard Basic course Preparatory to Commissioning
in Reserve Components of Army, Navy, & Air Forces

Figure 2. 1947 Education System²⁶⁷

addressed for majors or above. Professional Education schools are integrated into the pattern for all ranks through colonel. Senior officers, generals and colonels, "should attend Short Advanced Management Courses, as appropriate."²⁶⁸

It seems clear that by 1959 the AF had established a culture which valued education, but it did not necessarily require degree education beyond the baccalaureate level. The college type education the AF offered for some officers did not result in the awarding of a degree, and this type education was not an expectation of field grade or higher ranking officers.

AFM 36-23, 1969 through 1979

In 1969 Air Force Manual 36-23, Officer Personnel, Officer Career Management, provided guidance and instruction to active duty officers and commanders AF wide. It detailed philosophies, roles, and responsibilities and provided 45 separate chapters outlining career progression for various career fields. While the theme of the manual emphasized that the individual must manage his own career to maximize his performance in current and future assignments, AF requirements remained the foremost management consideration.²⁶⁹ The manual explained that due to the increasing technical complexity in the AF, the old system of relying on experienced officers to develop junior officers via exposure to the operational environment and on-the-job training was inadequate. The current environment demanded a professional development program. In AFM 36-23, Officer Personnel Officer Career Management, the Air Force Directorate of Personnel Planning had divided such a program into basic elements or building blocks. Three of these blocks were: skill training, PME, and advanced degrees.²⁷⁰ The AF provided education to meet current requirements but desired that officers develop their potential for future, unspecified, requirements.²⁷¹ The system was to produce "The Whole Man."²⁷²

Academic qualifications are an integral part of the career plan for all officers. *The purpose of enlarging the academic background of officers is to qualify them for duty positions of increasing responsibility and scope.* Each officer should assess his academic needs in relation to his career objectives and Air Force requirements, . . . and initiate action toward fulfilling these needs. Educational achievements discipline the intellect, increase the ability to abstract and articulate ideas, and provide a broader foundation for improved performance.²⁷³

Self-study, off-duty education, and professional reading provide self-development opportunities which enabled "each officer to improve his potential at a pace and in a manner of his own choosing . . . [and] are a means for advancement and selection for career opportunities in advance of his contemporaries."²⁷⁴ The manual counseled officers to recognize that career progression was a shared responsibility of the AF and the officer.²⁷⁵ It is interesting to note that the personnel command, not the education command, was publishing guidance on academic education's purpose and value.

The general career guide portion of the manual indicated post-graduate college education was available through the rank of lieutenant colonel.²⁷⁶ Different career paths placed different emphasis on the necessity of pursuing such an option. The guides were not meant to be ridged, but non-rated officers could expect to progress within the utilization field of their initial assignment throughout their careers. Rated officers would sometimes broaden their experience by shifting into other functional areas after completing an AFIT sponsored graduate degree program.²⁷⁷ A pilot was counseled to be diligent in pursuing education "if his future personal desires tend toward a highly specialized field."²⁷⁸ They were also informed that while desirable prerequisites for potential squadron commanders included a diversified background, advanced education was not a specific requisite.²⁷⁹ The position of squadron commander was a virtual prerequisite for continued advancement. Contrasted to this guidance was the strong counsel for officers in the navigator career field to seek education:

Officers aspiring to occupy key positions as leaders and managers within the Field should aggressively pursue related professional and graduate training. Master degrees in management are particularly desirable for officers who are advancing to higher level staff and command positions.²⁸⁰

The emphasis placed on advanced degree education varied across the career fields. Navigator-observer, air traffic control, weapons directors, missiles, safety, space systems, audiovisual, weather, scientific, avionics, information and security police career fields were all advised similarly. At either the initial or intermediate stages of career development they should seek advanced degree education through attendance at AFIT.²⁸¹ Officers in the avionics career

field were told that "Attendance in advanced degree and technical programs decrease in value as rank and experience accrue."²⁸² Those in the information field were encouraged to apply for AFIT because "graduate education [in any field] will enhance their overall value to the Air Force. Additionally, it can be a significant factor in promotion potential."²⁸³

This guidance indicates that many more officers were being counseled to seek attendance at AFIT than that facility could ever support. Also, the wide variety of counsel offered to the various career fields indicates either a significant variation in the needs for advanced education among career fields or a definite lack of coordination between the fields in arriving at their recommendations.

The 1976 version changed the manual to a regulation and included executive development programs in career development. PME was described as an executive development program, as was AFIT. A new option for executive development included the Research Associates Program which was designed to assign a few officers to universities engaged in research on national defense policy. Eligibility criteria included "a minimum of a master's degree in economics, history, international relations, operational research, political science, public administration and system analysis."²⁸⁴ There was obviously a wide variety of academic fields which qualified an officer for the program. The emphasis was apparently on the advanced degree, not any particular competency.

Self-development was still encouraged, but without the reference to advancement ahead of contemporaries, and the passage on academic qualifications was also changed.

Academic qualifications are an integral part of the career plan for all officers. Each officer should assess his academic needs in relation to his career objectives and Air Force requirements, . . . and initiate action toward fulfilling these needs.²⁸⁵

The revision deleted the passage which related the purpose of enlarging the academic background of officers and how advanced education achieved this purpose. This deletion could indicate either the information was universally acknowledged and therefore did not merit repetition, or the purpose of enlarging the academic background had changed and the regulation did not explain its new role.

When the regulation was revised again in 1979 the Research Associates Program description was rewritten. The regulation now pointed out that no academic credit was given for this tour which would last approximately one academic year.²⁸⁶ The criteria for selection still included a master's degree but the field was no longer specified.²⁸⁷ These changes seem likely to have been made due to the obvious shortcomings of the superseded version. Throughout this version the regulation's descriptions of desired educational levels for career fields were vague as to their purpose. The author's impression was that the regulation believed advanced degree education was a good thing, but not for any specific reason.

From the review of Air Force Manual 36-23 the author draws two conclusions. First, the disparities between expectations of officers in various career fields seemed to reflect the cultural split first identified in the 1947 program. Second, AF policy specifically emphasized advanced degree education but, after the manual deleted the explanation of the purpose of advanced degree education in career development, there was no vision in the emphasis.

AETC Career Path Guides

As a result of Year of Training initiatives discussed earlier, in 1993 the AF Military Personnel Center published various Career Path Guides to help officers plan and achieve their AF career goals. These guides described several career tracks an officer in a particular field could chose to follow. For pilots and navigators there were four tracks: fly only, staff, operations and leadership. The tracks were flexible, allowing some movement between the paths, particularly in the first 10 years of a career as all the paths had the objective to establish credibility in the field.²⁸⁸ The key to success, according to the guides, in any career was analogous to a three legged stool. An officer needed to build technical expertise early in his career, seek a challenging staff position with increased responsibility, and perform successfully in a tough leadership role such as squadron commander.²⁸⁹

Each major weapon system, such as fighter pilot, bomber pilot, airlift navigator or tanker/airlift electronic warfare officer, had a specific career path pyramid and experience matrix which were intended to explain "the foundation of experience required for position and rank."²⁹⁰

An officer who failed to build the foundation indicated could suffer the consequences later in his career.²⁹¹ Figure 3 was the Fighter Pilot Career Path Pyramid and Figure 4 was the associated Experience Matrix.

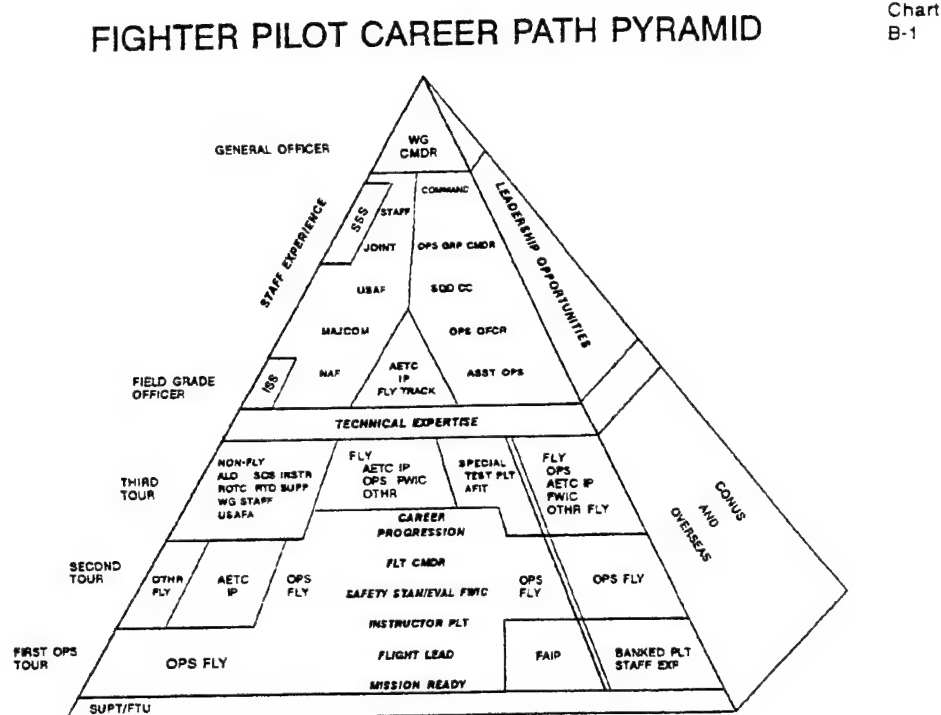


Figure 3. Career Path Pyramid²⁹²

The pyramid indicated PME schools' importance and relative timing. The only advanced academic education indicated was AFIT. The guide explained that this was a specialized career path fork, which would result in a directed duty assignment after graduation. The guide further explained that this could be the start of a very specialized and meaningful career path, "such as acquisitions management."²⁹³ With the right background and education a pilot may have had non-rated job opportunities.²⁹⁴ The implication was that for pilots AF sponsored education would result in a significant turn in a career path, not simply advanced competency on the present path. The only other guidance related to degree education was in the experience matrix which indicated that a masters was desired for a major but considered essential for a lieutenant colonel and above.

The discipline was not specified nor suggested.²⁹⁵ Nearly identical information was provided for navigators.

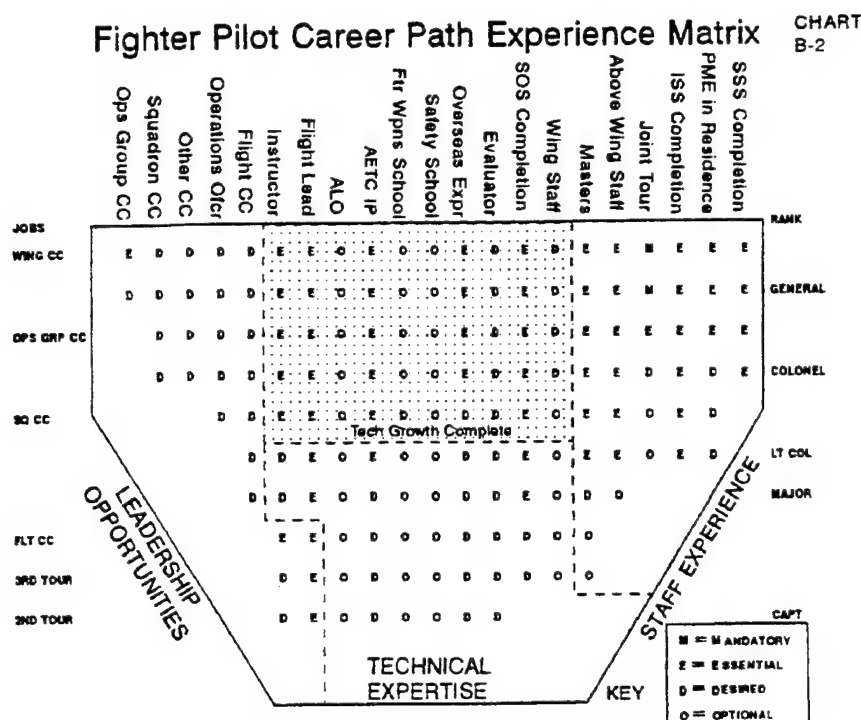


Figure 4. Experience Matrix²⁹⁶

If the examples are representative of the Career Guides then this information suggests that the Air Force desired to encourage officers to obtain an advanced degree in any field of their choice, and expected most to obtain one during off-duty time. If an officer chose to use AFIT to pursue an advanced degree then the Air Force recognized that (at least for pilots and navigators) he had probably made a significant career altering decision. The Career Guide sent incomplete messages in emphasizing degree education. In one respect the emphasis was clear: an advanced degree was considered essential for lieutenant colonels, regardless of the career track. However, while a master's degree was considered essential for officers above the rank of major, the Career Guides offer no explanation as to why the Air Force believed this was so.

USAFA's "The Flyby"

Members of the senior class at USAFA were provided a pamphlet called "The Flyby," distributed with the sanction of the Commandant of Cadets for the first time in 1994.²⁹⁷ The pamphlet was designed to ease the transition from cadet to officer by providing some practical advice to often asked questions. It contained this guidance relevant to advanced education:

The fact remains, however, that education is and will continue to be an important part of your career. There are two basic types of education that you need to be concerned with. The first is professional military education, the second is an advanced academic degree. . . . Just don't put classes off too long. All officers hoping to get promoted to major should have a Masters degree completed before the promotion board meets. It will make them more competitive. . . . If you delay, you just might pay (in terms of career progression). . . . As an officer, any management related area is a safe bet. . . . Try to stay away from institutions and courses that are designed to give people a quick (and almost useless) degree. . . . The bottom line is that you need to make sure the educational institution is regionally accredited and that the subject you choose is useful to both you and the Air Force.²⁹⁸

The guidance does not include a discussion of AFIT, but does describe assistance available through the Base Education Office and tuition assistance. This advice provided a clear link between advanced degree education and promotion expectations. The implication was that the advanced degree the new officer was counseled to seek would be obtained after duty, through a demonstration of personal effort above the normal duties of job performance.

Have there been any trends which have affected policies for degree-granting education?

This section traces the efforts to increase the stature and relevance of PME, the trend to centralize education policy at the highest levels in the military and the role which befell degree education due to these trends. It begins with the report of the Clements Committee, then addresses in turn the JCS JPME Policy Document, the Dougherty Board and Rostow-Endicott Committee, the Skelton Committee, the JCS Initial Certification Group, the Long Committee, and finally the revised JCS JPME Policy Document.

Clements Committee

Deputy Secretary of Defense William P. Clements, Jr., chaired the Committee on Excellence in Education in 1975. The committee, composed of policymakers such as the

Secretary of the AF, was able to address fundamental policy issues regarding education in the services. One of the areas they reviewed was the cooperative degree program of AU. In their opinion:

the resident college programs can and should challenge all officer students to achieve greater levels of professional excellence and therefore [The Committee] questions the wisdom of any program that competes for the students' time and attention. It also questions the propriety of programs which assign officers to the college for substantial periods of time prior and subsequent to the resident program for the express purpose of pursuing a graduate degree.²⁹⁹

Accordingly the commandants were directed to change their programs to eliminate those which were not integral parts of the curriculum, and those that included prior or subsequent assignment considerations to facilitate obtaining a degree.³⁰⁰

Policymakers desired the rigor of PME to be such that it required the undivided attention of the student. In order to facilitate this concept, degree education, which was perceived to be in competition, was de-emphasized.

JCS JPME Policy Document (1984)

The Joint Chiefs of Staff published the JCS Joint Professional Military Education Policy Document to fulfill statutory requirements to "establish doctrine for the coordination of the military education of members of the Armed Forces."³⁰¹ Although JCS was to establish doctrine for military education, "Authority for the development of policies and objectives for . . . officer postgraduate education is delegated to the individual Services."³⁰² PME "should give a military officer the skills and knowledge to make sound decisions in progressively more demanding command and management positions."³⁰³ Its objectives included:

To prepare military officers to meet the demands placed on them for the conduct of war and for associated activities at levels of increasing responsibility throughout their careers.

To develop leadership, management, and executive skills and competencies.

To enhance the military officer's knowledge, understanding, and proficiency in such areas as the art and science of war, military history, leadership, management.³⁰⁴

Officers selected for attendance "should possess high potential for promotion and for filling command and staff positions of increasing importance and responsibility."³⁰⁵ Eligibility

criteria to attend the National War College included possession of a bachelor's degree, "and a minimum of 1 year of graduate education for all students is desired."³⁰⁶ The Armed Forces Staff College also required a bachelor's degree.³⁰⁷

The purpose of PME was to enhance competency, especially in leadership and management. This was one of the arguments originally offered for requiring an undergraduate degree for commissioning. Only high quality individuals were to receive the education offered at the national level PME schools, and advanced academic education was an indication of the quality of the potential student. The definition of quality included a bachelor's degree, and desired some post-graduate work in any field.

Dougherty Board and Rostow-Endicott Committee (1987)

Spurred by the Goldwater-Nichols Department of Defense Reorganization Act of 1986, the Senior Service Schools initiated intense efforts to reshape their strategy and foreign policy curricula.³⁰⁸ The Act also served to encourage progress in services focusing on joint matters. The Dougherty Board and the Rostow-Endicott Committee examined the Senior Service Schools to determine the extent of the progress and to make recommendations for improvement. The Dougherty Board found that "A perception exists that our intermediate and senior colleges are 'gentlemen's courses.' This perception is not without basis but is not entirely correct."³⁰⁹ The Board reported that "More than anything else, our colleges need to ensure that students receive a military education at the postgraduate level."³¹⁰ To accomplish this rigor needed to be increased, and communication skills, specifically writing and presenting "arguments orally in a convincing and logical fashion"³¹¹ needed improvement. Notably the report compared the requirements of the schools to those of civilian institutions:

As in civilian institutions of higher learning, our military colleges should focus on providing depth, not breadth, and should recognize that continuity and coherence are prerequisites for successful programs.³¹²

Finally, the Dougherty Board recommended an accreditation system, similar to one used by civilian institutions, to validate the adequacy and currency of the joint curricula of the

schools.³¹³ Rostow-Endicott echoed some of these issues when it stated "the programs of the war colleges . . . [should] be serious educational efforts at the graduate level, and not mere quick training efforts."³¹⁴ The Committee believed that one of the most important consequences of the Cold War was the necessity of maintaining the morale and military effectiveness of our forces, and that "The United States has been reasonably successful in contributing to both of these goals by providing many forms of educational opportunity for military personnel of all ranks," a policy which should be continued.³¹⁵ It believed that "The mission of the senior military colleges, however, should be sharply distinguished from programs of individual enrichment of this character."³¹⁶ The committee expressed the view that:

In the course of their term at a war college, the students should achieve, by their own efforts, a background and a point of view which would provide them with a framework for analysis and lifetime habits of reading in the literature of strategy and diplomatic and military history as well as contemporary and prospective problems of security policy.³¹⁷

To the Committee it was obvious that considerable numbers of students lacked the desired quality commensurate with the purpose of the schools; it endorsed the Dougherty Board recommendation for a joint accreditation procedure; it stated more rigor was required in writing research papers of various lengths, subjected to criticisms of drafts, and the educational credentials of the faculties should be improved to bring the reputations of the colleges up to world class institutions.³¹⁸

The Board and the Committee present the idea that in order to achieve the status desired for PME the schools needed to become more like rigorous civilian institutions of higher learning. Previous education programs were of benefit for individual enrichment and morale, but were inadequate for the task of ensuring military effectiveness.

Skelton Committee (1989)

The Skelton Report devoted a substantial effort towards addressing quality and integrity of military education in an attempt to identify "characteristics of educational excellence for JCS accreditation of [Department of Defense] PME schools."³¹⁹ The panel criticized the schools for what was referred to as The Pecos River Theory used to develop curriculum: it was a mile wide

and an inch deep.³²⁰ Among the recommendations for improving the excellence of the PME schools were changes in pedagogy, improvement of the faculties, and coordination of policies at the highest command levels.

The Skelton Committee believed that the pedagogy should emphasize small group learning with active student participation, evaluation and accountability to the faculty and to peers.³²¹ Academic rigor required a challenging curriculum, student accountability and established standards against which performance could be measured. The Committee specifically recommended that students be required "to complete frequent essay-type examinations and to write papers and reports that are thoroughly reviewed, critiqued, and graded by faculty."³²² These, the Committee noted, were the "essential elements of graduate level education."³²³ There is no question but that these recommendations would serve to mold the schools along the lines of accredited civilian institutions of higher learning.

The Committee noted that the lack of a quality faculty was a problem all service schools shared.³²⁴ The faculties could be improved if they were motivated to strengthen their academic credentials by research grants, sabbaticals, and additional civilian education.³²⁵ This theme echoed the concerns expressed in the 1960's about AWC and ACSC.

The Skelton Committee noted that the Goldwater-Nichols inspired Joint Specialty Officer needed the intellectual capacity to deal with complex issues, ambiguity, and synthesis of a myriad of facts. The ability to deal with abstract notions and concepts required such an officer to be broadly educated, preferably in both civilian and military schools. However, education "outside of PME should not be viewed as a substitute for PME."³²⁶ The Committee also found the services required command emphasis to encourage self-development.³²⁷ The report concurred with General Andrew Goodpaster, former Superintendent of West Point, who believed "the nation is looking for individuals who can make personal sacrifices, have the self-discipline to study, and manage their time."³²⁸

Based on the 1984 version AFM 1-1 which was current at this time, the intelligent, dedicated officer described by the Skelton Committee would have found AF doctrinal support for his self-disciplined personal sacrifice of off-duty time to advance his civilian education.

JCS Initial Certification Group (1989)

In 1989 the Joint Chiefs of Staff established an Initial Certification Group (ICG) to establish a Process for Accreditation of Joint Education (PAJE). The initial recommendation to create the PAJE had considered using civilian accrediting associations and civilian education institutions. "The aim here was credibility."³²⁹ The intent was to show Congress that the Department of Defense did not simply accredit joint education by decree.³³⁰ The ICG strongly opposed this concept of a civilian alliance because:

PME colleges are unique with respect to civilian universities. First is the subject matter and underlying theme of PME schools: namely the conduct of war and the employment of combat forces. A second uniqueness would be the PME pedagogical environment. Civilian universities are ill-equipped to generate the academic interaction that results from bringing together a faculty and student body of select, military officers who have 10 to 25 years of experience in the major subject being taught. And rarely if ever, do civilian educational institutions have access to current, classified military information.³³¹

Although the ICG did not believe any civilian accrediting agency was competent to judge the merits of the Joint PME programs, it did believe the generic goals of any system of accreditation should be used and procedures should be based on "accepted standards and practices reflected in the current state of the art for accreditation of civilian institutions of higher education," tailored for the military schools.³³²

By these acts the programs of the senior service schools were becoming more like those of civilian institutions, just as the earlier studies had recommended.

National Defense University (NDU) Transition Planning Committee (1989)

The NDU Committee was established to study issues resulting from testimony of Admiral Crowe, CJCS, before the Skelton Panel, namely the establishment of a National Center for Strategic Studies.³³³ The NDU Committee acknowledged the direct influence of the committees and boards addressed above in the development of its concepts, which were to "further the

objectives of the Goldwater-Nichols Act.”³³⁴ In the view of the Committee, the National War College was the premier war college and the goal was to improve its prestige and reputation.³³⁵ “The NDU Committee recognizes that a ‘World Class’ organization cannot be developed overnight” but the reputation of the institution relies in part on the quality of the students.³³⁶ Although the Committee recommended that responsibility for student selection remained with the parent Service, those selected should be the “best and brightest.”³³⁷ The Committee applauded the efforts underway at the National War College to introduce greater rigor and challenge into its programs.³³⁸ The effects of earlier recommendations to increase rigor were beginning to be felt. However, the Committee still questioned student quality. This implied that while the process was improving, in order to improve the product the PME system need to improve the input.

CJCS JPME Policy Document (1990)

Revision of the 1984 JCS Joint Professional Military Education Policy Document was held in abeyance until the Skelton Panel completed its report.³³⁹ When it was reissued in 1990 it was a Chairman of the Joint Chiefs of Staff document, reflecting the increased importance accorded its contents, and it plagiarized wholesale the acknowledgments of influence which the NDU Committee published the year prior.³⁴⁰ It also included in an appendix an explanation of Bloom’s cognitive taxonomy, used as basis for the development of the various programs addressed by the document and first discussed by the Initial Certification Group.³⁴¹ This document demonstrated a dramatic increase in the centralization of education policy. For example, the CJCS established policy regarding class and seminar mix, military to civilian faculty ratio, faculty quality, student-faculty ratios, pedagogy and curriculum, accreditation, and PME college equivalence.

This policy document spelled out the relationships of various elements of the military education system. It produced officers “educated in the profession of arms for a particular specialty or career field,” and it also produced jointly educated strategic thinkers who in turn become senior officers who can maintain a national strategic context in implementing national policy.³⁴² The document was worded to imply an officer would be one or the other, but not both.

PME was a subset of military education "that meets service specific needs in addition to accomplishing" the traditional objectives identified in the 1984 document.³⁴³ (See page 77.) The framework of this system had five identifiable levels of military education--precommissioning through general/flag. Each level was associated with a particular rank, educational institution, focus, and joint emphasis.³⁴⁴ For the primary level, lieutenant through captain, the focus of military education was to reinforce service values, develop warfighting skills, enhance leadership and decision making ability, and improve management and communication skills. Institutions available to prosecute this focus included the possibility of "continuing professional education," and one option presented was graduate education at civilian or military institutions. For subsequent levels the focus changed considerably, emphasizing strategic considerations. However, the basic option of graduate education was not clarified or amended.³⁴⁵

Selection criteria for the National War College (NWC) was changed from the previous standard. A graduate degree, while not required, would "serve to enhance an officer's selection."³⁴⁶ Once enrolled, students of the NWC could participate in a graduate degree program that related to the NWC focus and curriculum, did not interfere with performance and did not "circumscribe regular post-NWC military assignment."³⁴⁷

Several issues were raised by this document. First, policy decisions relative to military education were now the responsibility of the highest level of DOD leadership. Second, education which aimed to enhance competency in a specialty was not adequate to produce the leaders required at the strategic level. Third, degree education at the graduate level enhanced an officer's potential to attend the most prestigious service school. If PME was to produce strategic thinkers, degree education was to indicate the quality of the individual attempting to gain admittance to an exclusive club.

The 1993 version of the CJCS Military Education Policy Document adds one significant change from the 1990 edition to the introduction:

Beyond the institutionalized structure and processes inherent in our military education system, it is incumbent on all officers to make a continuing, strong personal commitment to their professional development. Whether through an extensive professional library in the individual's home or office or intensive efforts on-the-job to become an expert in the many

facets of the profession of arms, each officer shares a responsibility to ensure continued growth and seasoning. As stated in a passage from The Armed Forces Officer, "The professional military education system, as good as it is, is just the basis for continual study and learning."³⁴⁸

The document retains the guidance that a graduate degree in an unspecified field served to enhance an officer's qualifications for selection for the advanced senior service schools, and those schools continued to emphasize high academic standards appropriate to graduate-level education.³⁴⁹ The appendix which elaborated on the taxonomy of education, first included in the 1990 version, was expanded significantly. The document clarifies cognitive and affective taxonomy for the layman, and presents an Instructional Systems Development model, developed and validated by the USAF, to link the instruction to the user and to support requirements in the field.³⁵⁰

The trend towards associating education with self-sacrifice and commitment, and the tendency to model PME on graduate education, both evident in the policies of the USAF, were now codified in policy statements from the Chairman, Joint Chiefs of Staff.

Summary

A process which began in 1975 with the Clements Committee and developed through the 1990 revision of the CJCS policy directive gives evidence of several trends in education. First, as a profession it was believed the services must have a system of continuous education which is rigorous, and policy development for this system tended to be pushed towards higher levels of command. Second, there existed an element of competition between the simultaneous pursuit of advanced PME and an advanced degree. Third, the model for the PME institutions is the civilian university at the post-graduate level. Although the service education system adopts the tools, forms and techniques applied in the civilian world, civilian institutions are fundamentally incapable of accomplishing the PME mission. Fourth, the increase in the academic credentials required to attend a senior service school can be directly attributed to the emphasis on joint education at the senior level, and the desire to increase the prestige of those senior schools.

Are there instances of policy support for degree-granting education for reasons other than career development?

Voluntary Education in the All Volunteer Force

Dr. James R. Schlesinger, Secretary of Defense, said in December 1974:

In this time of limited funding the one resource that continues to grow is the individual. This growth is through education. That is why we consider our educational opportunities so very essential to maintain the All-Volunteer Force. You may rest assured that continuing to provide these opportunities is, and will remain, one of top priority.³⁵¹

The USAF Director of Personnel Programs also recognized the power of graduate education opportunities to "support the attractiveness of the Air Force in terms of both initial personnel procurement and career retention."³⁵² The educational benefits of the GI Bill were recognized as offering "a major recruiting incentive, particularly for the higher quality individual."³⁵³ These positions were supported by a 1973 DOD survey of AF personnel which found that "in-service educational opportunities can be the single most potent source of motivation"³⁵⁴ to pursue a career, and many officers considered it the major reason to stay in the service.

Controversy attended these programs because of the difficulty in assessing the relevance of general, nonmilitary education to the performance of military duties.³⁵⁵ Further, gaining acceptance of the idea that one of the needs for education was derived from post service considerations was not easy.³⁵⁶ The issue of accountability was addressed by Dr. Kenneth Groves, Educational Director to the Commander of AU, when he stated:

Besides cost, a more difficult question to answer about Air Force professional education is its *real* value to the Air Force. . . . For many people accountability means that a school should be able to prove that its output - in the form of its graduates' increased skills and knowledge - is worth the investment in funds and other resources . . . [but] the question does not lend itself to scientific inquiry.³⁵⁷

Historically, acceptance of voluntary educational programs was obtained by categorizing them as morale programs "until it was realized that educational improvement might be helpful not only to the individual but to the service as well."³⁵⁸

Degree education programs received some emphasis due to the power they held in attracting quality individuals to the AF, retaining them, and preparing them for post-service life.

None of these reasons had a relationship to the objectives of the education system designed to promote suitable career development, nor did they relate to the objectives of the constituency at AU.

Minuteman Education Program

In 1961 the Strategic Air Command proposed that education be used "as a motivation device . . . and also as a recruiting aid to procure high quality officers"³⁵⁹ for missile launch control officer duty. Initially the program consisted of 165 students pursuing a degree in Graduate Aerospace Engineering at one location. The program soon spread to five bases with master's degrees offered in Management, Industrial Administration, and Industrial Management. Soon undergraduate degrees were added. The programs were offered through AFIT and were administered by AU.³⁶⁰ The program was considered a success as it proved that "it was possible to conduct . . . [a] quality graduate program at a remote off-campus site."³⁶¹ The original objective of the program was not to prove such a thesis, rather it was to solve the personnel problem of obtaining quality officers for a hard to fill career field. A further measure of its success was the fact that four of the six sites were eventually "accredited by the prestigious American Assembly of Collegiate Schools of Business. (Less than a third of the nation's schools of business qualify.)"³⁶² Although this was a notable accomplishment it was not an objective of the program. This program demonstrated for the AF the potential of civilian degree education to solve personnel problems, and demonstrated again the relationship of degree education to prestige and quality by citing both as evidence of success in a program that was ostensibly designed to achieve neither.

Degree-granting Education and Promotion Policy

Lieutenant Colonel Roger W. Alford, while looking into the problem of careerism in the AF for the Deputy Chief of Staff, Personnel, noted that although many definitions of careerism had been offered, the most solid definition rested on associating careerism with unprofessionalism. An action could be considered professional or unprofessional depending on

the motivation for the behavior.³⁶³ The behavior his study examined was the obtaining of an advanced degree. His statistical analysis resulted in several inferences:

Recently (1974 to 1977 cohorts), captains have shown a greater tendency to obtain master's degrees close to the primary promotion zone to major. This tendency has increased over time to where nearly twice as many captains are receiving master's degrees now at IPZ for major (1987) than in 1981.

The most popular master's degree programs are in business and administration. And the debate continues as to whether these degrees are needed for duty performance.

The advanced degree also creates some problems. Not only does obtaining the degree potentially distract from energies needed on the job, but business and administration areas of study can encourage a drift from military professionalism.

During the four-year period before primary zone consideration for major, captains increasingly receive master's degrees in systems management. . . . Perhaps some reasons for the growth spurt in . . . [particular] academic specialties are the availability (and ease) of on-base educational programs and perceived peer pressure to pursue an advanced degree.³⁶⁴

Although this was the only study which made such a direct correlation between advanced degrees and unprofessional behavior, there was ample evidence AF policy changes were instituted in consonance with Alford's findings. Dr. Dennis E. Showalter, writing in Air University Review, agreed with Alford when he wrote,

Circumstances contribute heavily within the U.S. Air Force to . . . encourage bureaucratic approaches to career planing. An officer who takes an advanced degree may be influenced more by the availability of courses than their subject matter; an MA of any kind can look good on one's record.³⁶⁵

The Alford study clearly indicates that policies regarding promotions and advanced degrees had created an atmosphere in which careerist, unprofessional behavior was becoming common. His solutions to this problem included altering the officer effectiveness report and implementing the recommendations of the Air Force Officer Professional Development Working Group. The Chief of Staff of the AF, General Larry D. Welch, had taken steps toward accepting both of these solutions. He appointed the Working Group to reduce careerism and redirect officer professional development. The philosophy the Working Group developed for Officer Professional Development rested on the recognition of service above self, and supporting

institutional rather than personal goals.³⁶⁶ One of the accepted recommendations was to change the focus of career management to one of professional development.³⁶⁷

Major General Billy J. Boles, Commander of Air Force Military Personnel Center, in 1988 advised all senior raters that enrollment in PME or advanced academic education was not relevant to the performance of the individual being evaluated. The fact that such direction needed to be established is strong support for the idea that the pursuit of advanced academic degrees had created a problem. He said it was up to , "The Central Selection board . . . [to] consider other 'whole person' factors."³⁶⁸ He was prompted to establish that guidance by direction of the Chief of Staff who believed that problems in the Officer Evaluation System had let other factors, not related to performance, become too influential in promotions. He specifically included advanced academic education among these factors. While it would continue to be important, it was more important for field grade officers than junior officers and was available to promotion boards elsewhere than the Officer Evaluation Report.³⁶⁹

When Military Personnel Center published OES Officer Evaluation System. Your Guide to the Revised Officer Evaluation System, it explained the reason for the change was that inflated Officer Effectiveness Report word pictures have caused a "tendency for other factors [such as advanced academic education] to be given more influence over officer professional development goals than they should."³⁷⁰ Air Force Pamphlet 36-6, USAF Officer's Guide to the Officer Evaluation System, released in August of 1988, addressed advanced degrees and the new effectiveness report. In the Rater Overall Assessment area of the report, "The rater may not state whether an officer has or has not completed or is working on PME or an advanced degree. This information is available elsewhere in the officer's record...."³⁷¹ The pamphlet provides examples of unacceptable comments, including stating "Enrolled in Masters Program."³⁷² Promotion recommendations were now determined in a separate process based on performance-based potential, and "Professional Military Education, advanced academic education, . . . aren't considered performance-based potential."³⁷³ In the new system "Comments addressing completion or pursuit of PME or advanced academic accomplishments are inappropriate."³⁷⁴

This guidance is strong evidence that the AF was attempting to de-emphasize academic degree education. Raters had been using completion of and enrollment in advanced degree programs to enhance the performance evaluation record of subordinates and the senior AF leadership decided this was inappropriate.

In 1995 there was a widespread perception held by the officer corps that an advanced degree was a necessary credential for continued advancement.³⁷⁵ Air Force Military Personnel Center studied the results of the four latest promotion boards to major and three latest promotion boards lieutenant colonel, revealing several facts:

A majority of the officers meeting the majors board over the past four years had an advanced degree. Officers with an advanced degree were selected at a higher rate than officers without an advanced degree. . . . As an officer progresses up the grade ladder, the percentage of eligibles with an advanced degree increases significantly, but the promotion opportunity decreases for both those with and those without an advanced degree.³⁷⁶

The selection rate of pilots in their primary zone of eligibility consideration for promotion to major, and receiving a "promote" recommendation was 67 percent if they had an advanced degree, and 32 percent if they did not. For navigators the same conditions yielded a difference of 65 percent versus 32 percent. For non-rated officers the difference was 51 percent versus 13 percent.

For promotion to lieutenant colonel, for an officer in his primary zone of eligibility with a "promote" recommendation, the differences were even more dramatic. Pilots holding an advanced degree were promoted at a rate of 56 percent versus 8 percent for those without, for navigators the rates were 44 percent versus 4 percent, and for non-rated officers the rates were 43 percent versus 8 percent.³⁷⁷ The results of this survey did not indicate a cause and effect relationship, merely a significant correlation. The promotion boards were identifying in the group of officers who held an advanced degree potential which merited promotion at a rate of up to ten times over the promotion rate of those officers who did not obtain an advanced degree. Officers who had not obtained an advanced degree were significantly more likely to be found lacking the potential necessary for advancement.

The 1995 Air Force Quality of life survey indicated that despite the efforts made to dissuade thought to the contrary, officers continued in their belief in the importance of an advanced degree to their career.³⁷⁸ In 1995 the AF implemented changes to the officer promotion system which allowed senior raters and other evaluators to use whole person factors. "such as advanced academic degrees and PME completion"³⁷⁹ in their overall assessment of an officer's promotion potential. However, although senior raters could use the information to assess potential, the Air Force Chief of Staff announced in January of 1996 that advanced academic achievement would be masked at central promotion boards to captain and to major. It would continue to be included above these ranks. This change of policy was initiated due to feedback provided by the quality of life survey, and due to the realization that not all career fields allow the same opportunity to pursue advanced off-duty education. The Chief of Staff explained the disparities disappear around the 16 year point:

This is in no way intended to communicate that completion of advanced degrees is not important. In fact, it actually emphasizes just the opposite--advanced degrees enhance professional development when applied at the right time for the right reasons. . . . [For field grade rank] This added dimension is essential for professional development and leadership maturity.³⁸⁰

The caution of the Chief of Staff that professional development was enhanced by a degree if it were obtained for the right reason has an apparent correlation to the Alford study's findings 7 years earlier. Obtaining an advanced degree might be unprofessional behavior if the motivation was not pure. Promotion policy of the Chief of Staff emphasized degree education, and focused the emphasis on promotion to lieutenant colonel. Degree education was essential for leadership maturity. The same policy de-emphasized degree education for junior officers by postponing the expectation.

Summary

There were several instances of policies which supported degree-granting education for reasons other than professional career development. The promise of an opportunity to advance one's education was used by the AF to recruit and retain individuals for the all volunteer force. It

was also used to recruit individuals to serve in hard to fill career fields. Finally, promotion procedures had allowed emphasis on degree education to become a problem and policy changes were instituted to focus the emphasis in accordance with the vision of the AF Chief of Staff. It is interesting to note that these three examples all originated outside of the purview of the education command. The personnel center has wielded tremendous influence over the emphasis on degree education.

Summary of Policies and Doctrine

The hypothesis that the evolution of policy and doctrine have emphasized the need for academic degrees is supported. The lack of education of the AF officer corps in 1947 created a problem which was solved by establishing a goal. That goal focused policy decisions and eventually resulted in a universally educated officer corps to the baccalaureate level.

Doctrine began to address the issue of education after the goal, a baccalaureate degree requirement for commissioning, had been achieved. The role of degree-granting education evolved with doctrine. At first it was merely a cursory reference to a personnel function but it became the oath identifying a personal commitment to AF professionalism through a demonstration of self-sacrifice.

Policy supported the AU goal by slowly eliminating accession sources which did not incorporate a degree requirement, while new sources which did were created. Programs which were created outside of officer accession sources maintained a consistent theme regarding advanced degrees. The AF policy was to encourage officers to pursue academic degrees during their off duty period. No programs were initiated for the sole purpose of raising general educational levels.

Career guidance helped to establish a culture which embraced continuous academic endeavor. It also helped to establish a culture which had significantly different expectations of officers in various career fields. The AF education system was exclusionary, demanded personal

effort during off-duty time, and was definitely linked to career progression as well as career development.

The trend in military education towards elevated responsibility for policy generation, the trend to increase the rigor of PME schools, and the desire again to elevate the prestige of particular schools has led to an emphasis on advanced degree education by creating a role in determining the quality of potential students. There have also been instances where the AF has used the promise of academic degree achievement for purposes other than professional development. This, too, emphasizes degree education.

AF policy has emphasized degree education.

¹David M. Schlatter, "The Educational Program of the Army Air Forces," in Proceedings of the Educational Advisory Staff Conference, (Maxwell Field, AL: Air University Press, 11-12 July 1947), 7.

²Schlatter, 7.

³Schlatter, 7.

⁴Schlatter, 7.

⁵Schlatter, 7.

⁶Air University, "The Training and Education System for Officers of the U. S. Air Force," (Maxwell AFB, AL: Air University Press, November 1949), 1; in Benson F. Fuller, Jr., "Professional Education for USAF Officers" (Ph.D. diss., Yale University, 1951), 5.

⁷Air Officer's Guide, 4th ed., (Harrisburg, PA.: The Military Service Publishing Company, 1950), 217.

⁸Air Officer's Guide, 8th ed., (Harrisburg, PA.: The Military Service Publishing Company, 1955), 317.

⁹John A. Kline, "Education and Training: Some Differences," Air University Review 36, no. 2 (January-February 1985): 94.

¹⁰Kline, 95.

¹¹Benton F. Fuller, Jr., "Professional Education for USAF Officers" (Ph.D. diss., Yale University, 1951), 24.

¹²Report of The Lightner Board-Review of Air War College and Air Command and Staff College, Lawrence S. Lightner, Major General, USAF, Chairman (Maxwell AFB, AL: 22 March 1973), 70.

¹³Lightner, 70.

¹⁴Sanders A. Laubenthal, "Chapter One--AFIT History: First Sixty Years 1919-1979." Reprinted from Air Force Institute of Technology Yesterday Today Tomorrow, (Wright-Patterson AFB, OH: Air Force Institute of Technology, 1979), 1 through 83. In Air Force Institute of

Technology Yesterday Today Tomorrow 1919-1994, ed. Ernie Keuchner, (Wright-Patterson AFB, OH: Air Force Institute of Technology, 1994), 1-38.

¹⁵Laubenthal, 1-48,1-49.

¹⁶Schlatter, 11.

¹⁷Leroy F. Prouty, "Procurement of Officer Personnel," Air University Quarterly Review 6, no. 2 (Summer 1953): 73. Lieutenant Colonel Prouty was the former Director, Personnel Planning, Headquarters Air Defense Command, which was an outgrowth of the former Continental Air Command.

¹⁸Air University History, (Maxwell AFB, AL.: Air University, 1987), 14.

¹⁹Fuller, 49.

²⁰Fuller, 53.

²¹Schlatter, 12.

²²Air Officer's Guide, (Harrisburg, PA.: The Military Service Publishing Company, 1948), 167.

²³Schlatter, 12.

²⁴Kenneth R. Williams, "The Use if Civilian Educators and Institutions In the Program of Air University," in Proceedings of the Educational Advisory Staff Conference, (Maxwell Field, AL: Air University Press, 11-12 July 1947), 21.

²⁵Laubenthal, 1-39.

²⁶Schlatter, 10.

²⁷Fuller, 24.

²⁸Schlatter, 17.

²⁹Schlatter, 10.

³⁰Schlatter, 11.

³¹Lightner, 22.

³²Lightner, 23.

³³Lightner, 23.

³⁴Kenneth J. Groves, "Air University And The Professional Education System," Air University Review 26, no. 5 (July-August 1975): 11.

³⁵Groves, 13.

³⁶Groves, 13.

³⁷F. Michael Rogers, "Why Professional Military Education?" Air University Review 26, no. 5 (July-August 1975): 8.

³⁸Rogers, 5.

³⁹Rogers, 5-8.

⁴⁰John E. Ralph, "Professional Identity in a Plural World," Air University Review 27, no. 2 (January-February 1976): 13.

⁴¹Rogers, 14.

⁴²Rogers, 14.

⁴³ Report of the Air University Committee on the Academic Levels of the Faculties of the Professional Military Schools, by Ralph W. Keller, Chairman (Maxwell AFB, AL: Ad Hoc Committee on Faculty Educational Level, 1 March 1963), 1.

⁴⁴Keller, 1.

⁴⁵Keller, 2.

⁴⁶Keller, 2.

⁴⁷Keller, 3.

⁴⁸Keller, 3.

⁴⁹Keller, 4.

⁵⁰Keller, 4.

⁵¹Keller, 5.

⁵²Arno H. Luehman, "The New Air War College," Air University Review 17, no. 2 (January-February 1966): 24.

⁵³Luehman, 23.

⁵⁴Luehman, 24.

⁵⁵Keller, 6.

⁵⁶Fuller, 103.

⁵⁷Keller, 13.

⁵⁸Department of Defense, Office of the Assistant Secretary of Defense (Manpower), Officer Education Study, vol. 1, ([Washington D.C.]: U.S. Department of Defense, Office of the Assistant Secretary of Defense (Manpower), 1966), 68.

⁵⁹Officer Education Study, vol. 1, 70.

⁶⁰Report to the Joint Chiefs of Staff of the National War College and the Industrial College of the Armed Forces Survey Board, Dr. James Phinney Baxter, III, Chairman, (Washington D.C.: The National War College and the Industrial College of the Armed Forces Survey Board, 20 January 1955): 8.

⁶¹John B. Barron, "Wanted: Intellectual Leadership," Air University Quarterly Review 3, no. 3 (Winter 1949): 17, 21. Thomas S. Torresson, Jr., "A Plan for the Educational Development of the Air Force Officer," Air University Quarterly Review 3, no. 4 (Spring 1950): 49. Wendell A. Hammer, "Which Officers Should be Educated?" Air University Quarterly Review 6, no. 1 (Spring 1953): 79. Cecil E. Combs, "Science, Liberal Arts, or Both?" Air University Quarterly Review 10, no. 3 (Fall 1958): 9. Robert J. Ulrich, "Don't Let Efficiency Squelch Education!" Air University Quarterly Review 10, no. 4 (Winter 1958-1959): 91, and Robert J. Ulrich, "Officer Education: Let's Make it Attractive," Air University Quarterly Review 10, no. 4 (Summer 1960): 28.

⁶²Lightner, 1.

⁶³Lightner, 55, 63.

⁶⁴Lightner, 57.

⁶⁵Lightner, 16, 17.

⁶⁶Department of Defense, Office of the Assistant Secretary of Defense (Manpower), Officer Education Study, vol. 2, ([Washington D.C.]: U.S. Department of Defense, Office of the Assistant Secretary of Defense (Manpower), 1966), 304.

⁶⁷Air University History, vol. 1, (Maxwell AFB.: Air University, 1961), 41; Air University History, vol. 1, (Maxwell AFB.: Air University, 1962), 47, 58.

⁶⁸Officer Education Study, vol. 1, 38.

⁶⁹Officer Education Study, vol. 2, 306.

⁷⁰Officer Education Study, vol. 2, 305.

⁷¹Officer Education Study, vol. 1, 39.

⁷²Officer Education Study, vol. 2, 309.

⁷³Officer Education Study, vol. 2, 310.

⁷⁴Officer Education Study, vol. 2, 310.

⁷⁵Officer Education Study, vol. 2, 312.

⁷⁶Lightner, 29.

⁷⁷Lightner, 29.

⁷⁸Lightner, 29.

⁷⁹See Dale O. Smith, "Air University 2000 AD," Air University Quarterly Review 6, no. 4 (Winter 1953-1954): 26-27.

⁸⁰Lightner, 14.

⁸¹Committee on Excellence in Education, The Senior Service Colleges: Conclusions and Initiatives, William P. Clements, Jr., Chairman, (Washington D.C.: U.S. Government Printing Office, 5 June 1975), 16.

⁸²Air University History, (Maxwell AFB, AL.: Air University, 1989-1990), 12-13.

⁸³Air University History, (1989-1990), 70.

⁸⁴Air University History, (1989-1990), 71.

⁸⁵"Chapter C Need For Degree-Granting Authority," in Response to the U.S. Department of Education Self-Appraisal Questionnaire, (Maxwell AFB, AL.: Air University, undated), 13.

⁸⁶"Air Command and Staff College," Air University Catalogue 1995-1996, [on line] available: <http://www.au.af.mil/au/cat/acsc.htm>

⁸⁷Air University History, (1989-1990), 70.

⁸⁸Laubenthal, 1-30.

⁸⁹Laubenthal, 1-29, 1-32.

⁹⁰Laubenthal, 1-33.

⁹¹Laubenthal, 1-33.

- ⁹²Laubenthal, 1-38.
- ⁹³Laubenthal, 1-36, 1-39.
- ⁹⁴Laubenthal, 1-39.
- ⁹⁵Laubenthal, 1-39.
- ⁹⁶Laubenthal, 1-38.
- ⁹⁷Laubenthal, 1-34.
- ⁹⁸Laubenthal, 1-39.
- ⁹⁹Laubenthal, 1-45.
- ¹⁰⁰Laubenthal, 1-46.
- ¹⁰¹Report of the Scientific Advisory Board, Louis N. Ridenour, Chairman (21 September 1949) in Laubenthal, 1-47.
- ¹⁰²Ridenour, in Laubenthal, 1-47.
- ¹⁰³Laubenthal, 1-48, 1-49.
- ¹⁰⁴Laubenthal, 1-48.
- ¹⁰⁵Laubenthal, 1-54.
- ¹⁰⁶Laubenthal, 1-55.
- ¹⁰⁷Laubenthal, 1-55, 1-56.
- ¹⁰⁸USAFIT letter to US Office of Education, 10 December 1953, in Laubenthal, 1-57.
- ¹⁰⁹Congress, Senate, Committee on Armed Services, Report [To accompany S. 3712], by Mr. Hendrickson, 83rd Cong., 2nd sess. , 1954, S.R. 2014, 3.
- ¹¹⁰S.R. 2014, 3.
- ¹¹¹S.R. 2014, 3.
- ¹¹²Schlatter, 9.
- ¹¹³Fuller, 130-131.
- ¹¹⁴Fuller, 127-128.
- ¹¹⁵Schlatter, 12.
- ¹¹⁶John P. Lisack, "Air Force Officer Education," Air University Review 16, no. 1 (November/December, 1964): 89., and Fuller, 103.
- ¹¹⁷Schlatter, 9.
- ¹¹⁸Lightner, 5.
- ¹¹⁹Lightner, 69.
- ¹²⁰Report of the Fairchild Board, cited in Report of the Conference, USAF Educational Conference, General Thomas S. Power, Chairman, (Maxwell AFB, AL.; USAF Educational Conference, 17 November 1959), A3.
- ¹²¹Fuller, 113, 139.

¹²²Report of the Rawling Board, cited in Report of the Conference, USAF Educational Conference, General Thomas S. Power, Chairman, (Maxwell AFB, AL.: USAF Educational Conference, 17 November 1959), A 4, A 7.

¹²³Report of the Conference, USAF Educational Conference, General Thomas S. Power, Chairman, (Maxwell AFB, AL.: USAF Educational Conference, 17 November 1959), A 4, A 7.

¹²⁴Fuller, 385-386.

¹²⁵Laubenthal, 1-63.

¹²⁶John P. Lisack, "Educational Requirements of the USAF Officer Corps." Air University Quarterly Review 13, no. 2 (Fall 1961): 98.

¹²⁷Power, foldout, 21.

¹²⁸John P. Lisack, "Identification and Use of Educational Qualifications in the New Personnel Management System," Air University Quarterly Review 14, No. 3 (Summer 1963): 89.

¹²⁹Lisack, "Air Force Officer Education," 91.

¹³⁰Power, foldout, 21.

¹³¹Power, foldout, 21.

¹³²Power, foldout, 21.

¹³³Gene E. Talbert, John P. Hourigan, James L Hoyt, An Analysis of the System For Determining and Validating Air Force Professional Education Requirements, (Maxwell AFB AL: Air Force Systems Command, April 1971), v.

¹³⁴Talbert, Hourigan, Hoyt, 7.

¹³⁵Talbert, Hourigan, Hoyt, 50.

¹³⁶Talbert, Hourigan, Hoyt, 50.

¹³⁷Talbert, Hourigan, Hoyt, 7.

¹³⁸Talbert, Hourigan, Hoyt, 5.

¹³⁹Talbert, Hourigan, Hoyt, 52.

¹⁴⁰Talbert, Hourigan, Hoyt, 12.

¹⁴¹Talbert, Hourigan, Hoyt, 52.

¹⁴²Talbert, Hourigan, Hoyt, 7, 26, 52.

¹⁴³Talbert, Hourigan, Hoyt, 30.

¹⁴⁴Laubenthal, 1-83.

¹⁴⁵Lisack, "Use of Educational Qualifications," 86, 89.

¹⁴⁶Officer Education Study, vol. 2, 375.

¹⁴⁷Officer Education Study, vol. 2, 374.

¹⁴⁸Air Force Instruction 36-2302, Personnel, Professional Development, CD-ROM Version August 1995, Chapter 1 "Graduate Education Program," (Washington D.C.: Headquarters United States Air Force, 26 August 1994), 1.

¹⁴⁹ Air Force Instruction 36-2302, CD-ROM Version August 1995, Chapter 1 "Graduate Education Program, 1.

¹⁵⁰ Mathew Santoni, "Notes To Accompany Analysis Of AFIT Sponsored AAD Pay Back," (Randolph AFB, TX.: Air Force Military Personnel Center, DPSAA, 20 November 1995).

¹⁵¹ Air Force Instruction 36-2302, Personnel, Professional Development, CD-ROM Version August 1995, Chapter 2, "Professional Continuing Education," (Washington D.C.: Headquarters United States Air Force, 26 August 1994), 1.

¹⁵² Air Force Instruction 36-2302, CD-ROM Version August 1995, Chapter 2, "Professional Continuing Education," 1.

¹⁵³ Air Force Instruction 36-2302, Personnel, Professional Development, CD-ROM Version August 1995, Chapter 3, "Fellowships, Scholarships, and Grants," (Washington D.C.: Headquarters United States Air Force, 26 August 1994), 1.

¹⁵⁴ Congress, Senate, Air Force Academy Act, 83rd Cong., 2nd sess., 1954, S.R. 1041. 2109.

¹⁵⁵ Air Force Academy Act, 2109.

¹⁵⁶ Air Force Academy Act, 2105.

¹⁵⁷ Air Force Academy Act, 2108-2109.

¹⁵⁸ Air Force Academy Act, 2117.

¹⁵⁹ Thomas S. Mooreman, "Basic Philosophical Concepts of The United States Air Force Academy," Air University Review 20, no. 1 (November-December 1968): 5.

¹⁶⁰ Robert F. McDermott, "The USAF Academy Academic Program," Air University Review 20, no. 1 (November-December 1968): 13.

¹⁶¹ McDermott, 13.

¹⁶² McDermott, 15.

¹⁶³ Ernie Keuchner, ed., "Chapter Two Leadership and Organization," Air Force Institute of Technology Yesterday Today Tomorrow 1919-1994 (Wright-Patterson AFB, OH: Air Force Institute of Technology, 6 June 1994), 2-5.

¹⁶⁴ Kline, 94.

¹⁶⁵ Air University History, (Maxwell AFB, AL.: Air University, 1978), 29.

¹⁶⁶ Air University History, (1978), 33.

¹⁶⁷ Air University History, (1978), 35.

¹⁶⁸ Air University History, (1978), 39.

¹⁶⁹ Dennis F. Casey, Reshaping the Future: From ATC to AETC, (Randolph AFB, TX.: Office of History and Research, Headquarters Air Education and Training Command, December 1994), 55; and Air University History, (1978), 40.

¹⁷⁰ Casey, 55.

¹⁷¹ Air University History, (1978), 47.

¹⁷² Air Training Command History, vol. 1, (Randolph AFB, TX.: Air Training Command, 1983), 12.

- ¹⁷³Air Training Command History, vol. 1, (1983), 13.
- ¹⁷⁴Air University History, (1978), 215.
- ¹⁷⁵Air University History, vol. 1, (Maxwell AFB, AL.: Air University, 1987), 14.
- ¹⁷⁶Peter Grier, "The New Look in Training," Air Force Magazine 69, no. 4, (April 1993): 46.
- ¹⁷⁷Merril A. McPeak, "Organize, Train, and Equip," Speech, Air Force Association National Convention, Washington, D.C., 18 September 1991, Selected Works, (Maxwell AFB, AL.: Air University Press, August 1995), 51.
- ¹⁷⁸Merril A. McPeak, "Smaller but Tougher: Update on the Air Force Restructure," Speech, Air Force Association Air Warfare Symposium, Orlando, Florida, 30 January 1992, Selected Works, 129.
- ¹⁷⁹Merril A. McPeak, "Air Force of Today and Tomorrow," Statement before the House Armed Services Committee, Washington, D.C., 20 February 1992, Selected Works, 133.
- ¹⁸⁰Merril A. McPeak, "1992: The Year of Training," Speech, Air Force Association National Convention, Washington, D.C., 18 September 1992, Selected Works, 182.
- ¹⁸¹Grier, 48.
- ¹⁸²Casey, 57.
- ¹⁸³Casey, 57.
- ¹⁸⁴Grier, 48.
- ¹⁸⁵Shelia E. Widnall, "The State of the Air Force," Airpower Journal 9, no. 1, (Spring 1995): 7.
- ¹⁸⁶Merril A. McPeak, "Our Air Force in Transition: Organizing, Training, and Equipping," Speech, Air Force Association Air Warfare Symposium, Orlando, Florida 5 February 1993, Selected Works, 197.
- ¹⁸⁷McPeak, "Our Air Force in Transition," 198.
- ¹⁸⁸USAF Fact Sheet 94-08 Air Education and Training Command, Air Force Home Page, "Air Education and Training Command," [on line] available: http://www.dtic.dla.mil/airforcelink/pa/factsheets/Air_Education_and_Training_Co.html
- ¹⁸⁹USAF Fact Sheet 94-08, [on line].
- ¹⁹⁰USAF Fact Sheet 94-06 Air University, Air Force Home Page, "Air Education and Training Command," [on line] available: http://www.dtic.dla.mil/airforcelink/pa/factsheets/Air_Education_and_Training_Co.html
- ¹⁹¹"AETC Role and Mission Statement," [online].
- ¹⁹²McPeak, "Our Air Force in Transition," 198.
- ¹⁹³"AETC's Role and Mission Statement," [on line].
- ¹⁹⁴Noel F. Parrish, "New Responsibilities of Air Force Officers," Air University Quarterly Review 1, no. 1 (Spring 1947): 41.
- ¹⁹⁵Schlatter, 9.
- ¹⁹⁶Schlatter, 9.

¹⁹⁷Fuller, 18.

¹⁹⁸Prouty, 70., and Lisack. "Air Force Officer Education," 89.

¹⁹⁹Department of the Air Force, Air Force Regulation 53-7, Schools: Officer Advanced Academic Degree Requirements, RCS: HAF P207, (Washington: Department of the Air Force, 16 June 1967), 1.

²⁰⁰Department of the Air Force, Air Force Manual 1-2 Air Doctrine United States Air Force Basic Doctrine, (Washington D.C.: Department of the Air Force, 1 April 1953, 1 April 1954, 1 April 1955, 1 December 1959). With the 1959 version the manual series title changed from Air Doctrine to Aerospace Doctrine.

²⁰¹Cecil E. Combs, "Science, Liberal Arts, or Both?" Air University Quarterly Review 10, no. 3 (Fall 1958): 6.

²⁰²Department of the Air Force, Air Force Manual 1-2 Aerospace Doctrine United States Air Force Basic Doctrine Draft #5, (Washington D.C.: Department of the Air Force, 31 January 1963), 59.

²⁰³Air Force Basic Doctrine Draft #5, (1963), 59.

²⁰⁴Air Force Basic Doctrine Draft #5, (1963), 59.

²⁰⁵Air Force Basic Doctrine Draft #5, (1963), 60.

²⁰⁶Department of the Air Force, Air Force Manual 1-1 Aerospace Doctrine United States Air Force Basic Doctrine, (Washington D.C.: Department of the Air Force), 14 August 1964.

²⁰⁷Department of the Air Force, Air Force Manual 1-1, Aerospace Doctrine United States Air Force Basic Doctrine, (Washington D.C.: Department of the Air Force, 28 September 1971).

²⁰⁸Department of the Air Force, Air Force Manual 1-1, Aerospace Doctrine United States Air Force Basic Doctrine, (Washington D.C.: Department of the Air Force, 15 January 1975), 3-6.

²⁰⁹Air Force Basic Doctrine, (1975), 3-6.

²¹⁰Department of the Air Force, Air Force Manual 1-1, Aerospace Doctrine United States Air Force Basic Doctrine, (Washington D.C.: Department of the Air Force, 14 February 1979), 4-9.

²¹¹Air Force Basic Doctrine, (1979), 4-10.

²¹²Air Force Basic Doctrine, (1979), 4-11.

²¹³Department of the Air Force, Air Force Manual 1-1, Aerospace Doctrine United States Air Force Basic Doctrine, (Washington D.C.: Department of the Air Force, 16 March 1984), 4-6.

²¹⁴Air Force Basic Doctrine, (1984), 4-7.

²¹⁵Department of the Air Force, Air Force Manual 1-1, Basic Aerospace Doctrine of the United States Air Force, vol. 1, (Washington D.C.: Department of the Air Force, March 1992), v.

²¹⁶Basic Aerospace Doctrine, vol. 1, (1992), 18.

²¹⁷Basic Aerospace Doctrine, vol. 1, (1992), 19.

²¹⁸Department of the Air Force, Air Force Manual 1-1, Basic Aerospace Doctrine of the United States Air Force, vol. 2, "Essay X, Training the Air Force: The Four Components," (Washington D.C.: Department of the Air Force, March 1992), 240.

- ²¹⁹Basic Aerospace Doctrine, vol. 2, (1992), 240.
- ²²⁰Basic Aerospace Doctrine, vol. 2, (1992), 243.
- ²²¹William R. Richardson, "Officer Training and Education," Military Review (October 1984), 26-28, 33. In Basic Aerospace Doctrine, vol. 2, (1992), 243.
- ²²²Muir S. Fairchild, "Second Board of Visitors Report," (Maxwell AFB AL.: Headquarters Air University, 1946), 4-5. In Basic Aerospace Doctrine, vol. 2, (1992), 244.
- ²²³Basic Aerospace Doctrine, vol. 2, (1992), 246.
- ²²⁴Basic Aerospace Doctrine, vol. 2, (1992), 246.
- ²²⁵Basic Aerospace Doctrine, vol. 2, (1992), 247.
- ²²⁶Department of the Air Force, Air Force Regulation 36-5 Officer Personnel Appointment of Officers in the Regular Air Force, (Washington D.C.: Department of the Air Force, 25 February 1952), 3.
- ²²⁷Department of the Air Force, Air Force Regulation 36-5 Officer Personnel Appointment of Officers in the Regular Air Force, (Washington D.C.: Department of the Air Force, 31 March 1959), 4.
- ²²⁸Department of the Air Force, Air Force Regulation 36-5 Officer Personnel Appointment of Officers in the Regular Air Force, (Washington D.C.: Department of the Air Force, 15 August 1961), 2.
- ²²⁹Fuller, 110.
- ²³⁰Power, A 17.
- ²³¹Power, A 19.
- ²³²Power, A 22.
- ²³³Power, A 25.
- ²³⁴Power, A 25.
- ²³⁵Lisak, "Air Force Officer Education," 86.
- ²³⁶Lisak, "Air Force Officer Education," 87.
- ²³⁷Army Air Force Letter 50-71, "Subject: Undergraduate College Education in Civilian Institutions for Air Corps Officers, Regular Army," (Washington D.C.: Headquarters, Army Air Forces 24 September 1947), 1.
- ²³⁸Army Air Force Letter 50-71, 2.
- ²³⁹Army Air Force Letter 50-21, "Subject: Graduate Training of AAF Officers in Civilian Educational Institutions," (Washington D.C.: Headquarters, Army Air Forces 29 October 1946), 1.
- ²⁴⁰Department of the Air Force, Air Force Regulation 50-15, Training Officer Training at Civilian Institutions, (Washington D.C.: Headquarters, USAF 4 October 1949), 1.
- ²⁴¹Air Force Regulation 50-15, (1949), 1, 2.
- ²⁴²Department of the Air Force, Air Force Regulation 34-3, Personnel Services Air Force Information and Education Program, (Washington D.C.: Headquarters, USAF 15 July 1949), 1.

²⁴³Air Force Regulation 34-3, (1949), 6.

²⁴⁴Air Force Regulation 34-3, (1949), 2.

²⁴⁵Fuller, 41.

²⁴⁶Fuller, 41.

²⁴⁷Air Officer's Guide, (Harrisburg, PA.: The Military Service Publishing Company, 1948), forward, and 6th ed., (1952), 315. General Hoyt S. Vandenberg, Air Force Chief of Staff, wrote in the forward to the 7th edition, 1953, the Air Officer's Guide has offered "... sage advice and comprehensive, up-to-date facts ... [and] has well served officers of the Air Force." The Air Force Academy Library received the 9th edition, 1956, as a gift from General Curtis E. LeMay.

²⁴⁸Air Officer's Guide, (1948), 315.

²⁴⁹Air Officer's Guide, 8th ed., (Harrisburg, PA.: The Military Service Publishing Company, 1955), 332-333.

²⁵⁰Air Officer's Guide, (1948), 201.

²⁵¹Air Officer's Guide, (1955), 340.

²⁵²Air Officer's Guide, 14th ed., (Harrisburg, PA.: The Stackpole Company, formerly The Military Service Publishing Company, 1962), 244.

²⁵³Air Officer's Guide, 18th ed., (Harrisburg, PA.: The Stackpole Company, 1967), 268.

²⁵⁴Air Officer's Guide, (1967), 268.

²⁵⁵Schlatter, 16.

²⁵⁶Fuller, 25.

²⁵⁷Fuller, 29-30.

²⁵⁸Schlatter, 15.

²⁵⁹Fuller, 25.

²⁶⁰Department of the Air Force, Air Force Regulation 50-15, Training: Officer Training at Civilian Institutions, (Washington D.C.: Department of Air Force, 4 October 1949), in Fuller, 126.

²⁶¹Power, 3, 36.

²⁶²Power, 36.

²⁶³Power, 36.

²⁶⁴Power, 36.

²⁶⁵Officer Education Study, vol. 2, 219.

²⁶⁶Power, 36.

²⁶⁷Schlatter, 15.

²⁶⁸Power, 36.

²⁶⁹Department of the Air Force, Air Force Manual 36-23, Officer Personnel Officer Career Management, (Washington D.C.: Department of the Air Force, 13 June 1969), 1-1, 3-6

- ²⁷⁰ Air Force Manual 36-23, (1969), 1-2.
- ²⁷¹ Air Force Manual 36-23, (1969), 3-1.
- ²⁷² Air Force Manual 36-23, (1969), 3-1.
- ²⁷³ Air Force Manual 36-23, (1969), 6-3.
- ²⁷⁴ Air Force Manual 36-23, (1969), 6-3.
- ²⁷⁵ Air Force Manual 36-23, (1969), 7-4.
- ²⁷⁶ Air Force Manual 36-23, (1969), 6-11.
- ²⁷⁷ Air Force Manual 36-23, (1969), 7-2.
- ²⁷⁸ Air Force Manual 36-23, (1969), 8-3.
- ²⁷⁹ Air Force Manual 36-23, (1969), 8-4.
- ²⁸⁰ Air Force Manual 36-23, (1969), 9-2.
- ²⁸¹ Air Force Manual 36-23, (1969), chapters 9 through 43.
- ²⁸² Air Force Manual 36-23, (1969), 23-2.
- ²⁸³ Air Force Manual 36-23, (1969), 41-3.
- ²⁸⁴ Department of the Air Force, Air Force Regulation 36-23, Officer Personnel Officer Career Management, (Washington D.C.: Department of the Air Force, 16 April 1976), 2-4.
- ²⁸⁵ Air Force Regulation 36-23, (1976), 4-2.
- ²⁸⁶ Department of the Air Force, Air Force Regulation 36-23, Officer Personnel Officer Career Management, (Washington D.C.: Department of the Air Force, 26 December 1979), 2-3.
- ²⁸⁷ Air Force Regulation 36-23, (1979), 2-4.
- ²⁸⁸ "Pilot Career Path Guide," (Randolph AFB, TX.: Air Force Military Personnel Center, September 1993), 2-3, and "Navigator Career Path Guide," (Randolph AFB, TX.: Air Force Military Personnel Center, September 1993), 2-3.
- ²⁸⁹ "Pilot Career Path Guide," 3-4, and "Navigator Career Path Guide," 3-4.
- ²⁹⁰ "Pilot Career Path Guide," 4.
- ²⁹¹ "Pilot Career Path Guide," 4.
- ²⁹² "Pilot Career Path Guide," appendix B.
- ²⁹³ "Pilot Career Path Guide," appendix B.
- ²⁹⁴ "Pilot Career Path Guide," appendix B.
- ²⁹⁵ "Pilot Career Path Guide," appendix B.
- ²⁹⁶ "Pilot Career Path Guide," appendix B.
- ²⁹⁷ "The Flyby," 2nd ed., Captain Sandra L. Petrie, editor in chief, (United States Air Force Academy, CO.: 34th Training Wing, 1995), in cover letter by Brigadier General John D. Hopper, Jr., Commandant of Cadets.
- ²⁹⁸ Petrie, 31-36.
- ²⁹⁹ Clements, 16.

- ³⁰⁰Clements, 16.
- ³⁰¹Joint Chiefs of Staff, Joint Professional Military Education Policy Document, SM-189-84, (Washington D.C.: Joint Chiefs of Staff 23 March 1984), I-1.
- ³⁰²Military Education Policy Document, (1984), I-2.
- ³⁰³Military Education Policy Document, (1984), I-2.
- ³⁰⁴Military Education Policy Document, (1984), II-1.
- ³⁰⁵Military Education Policy Document, (1984), III-2, III-3.
- ³⁰⁶Military Education Policy Document, (1984), V-3.
- ³⁰⁷Military Education Policy Document, (1984), V-4.
- ³⁰⁸Institute for National Strategic Studies, The Teaching of Strategy and Foreign Policy at the Senior War Colleges: A Personal Assessment, by Eugene V. Rostow and John E. Endicott (Rostow-Endicott Report), (Washington D.C.: U.S. Government Printing Office, 11 June 1987), 9.
- ³⁰⁹Senior Military Schools Review Board, The Report of the Senior Military Schools Review Board On Recommendation to the Chairman of the Joint Chiefs of Staff Regarding Professional Military Education in Joint Matters, Russell E. Dougherty, Chairman, (Washington D.C.: Joint Chiefs of Staff, 7 May 1987), 17.
- ³¹⁰Dougherty, 16.
- ³¹¹Dougherty, 17-19.
- ³¹²Dougherty, 16.
- ³¹³Dougherty, iii.
- ³¹⁴Rostow, Endicott, 20.
- ³¹⁵Rostow, Endicott, 20.
- ³¹⁶Rostow, Endicott, 20.
- ³¹⁷Rostow, Endicott, 21.
- ³¹⁸Rostow, Endicott, 21-24, 30.
- ³¹⁹The Report of The JCS Initial Certification Group On Recommendations to the Chairman of the Joint Chiefs of Staff Regarding Professional Military Education and JCS Program for Joint Professional Military Education, (Washington D.C.: Joint Chiefs of Staff, 22 May 1989), D-1.
- ³²⁰Panel on Military Education, Report of the Panel on Military Education of the One Hundredth Congress, Ike Skelton, Chairman, (Washington D.C.: House of Representatives, Committee on Armed Services, 21 April 1989), 30.
- ³²¹Skelton, 158.
- ³²²Skelton, 162, 7.
- ³²³Skelton, 7.
- ³²⁴Skelton, 135.
- ³²⁵Skelton, 141.

- ³²⁶Skelton, 56, 40.
- ³²⁷Skelton, 14.
- ³²⁸Skelton, 162.
- ³²⁹Initial Certification Group, D-2.
- ³³⁰Initial Certification Group, D-2.
- ³³¹Initial Certification Group, D-2.
- ³³²Initial Certification Group, D-3.
- ³³³National Defense University Transition Planning Committee, National Defense University Transition Planning Committee Final Report, Robert L. J. Long, Chairman, (The Long Committee), (Washington D.C.: U.S. Government Printing Office, 25 August 1989), 1.
- ³³⁴Long, 33, 2.
- ³³⁵Long, 11, 18.
- ³³⁶Long, 18, 6.
- ³³⁷Long, 68, 11.
- ³³⁸Long, 68.
- ³³⁹Initial Certification Group, ES-2.
- ³⁴⁰Chairman of the Joint Chiefs of Staff, Military Education Policy Document, CM-344-90, (Washington D.C.: Office of the Chairman of the Joint Chiefs of Staff, 1 May 1990), I-2, I-3.
- ³⁴¹Military Education Policy Document, (1990), A-11, and Initial Certification Group, B-2.
- ³⁴²Military Education Policy Document, (1990), II-2.
- ³⁴³Military Education Policy Document, (1990), II-2.
- ³⁴⁴Military Education Policy Document, (1990), II-1, II-4.
- ³⁴⁵Military Education Policy Document, (1990), II-5 - II-9.
- ³⁴⁶Military Education Policy Document, (1990), IV B-3.
- ³⁴⁷Military Education Policy Document, (1990), IV B-5.
- ³⁴⁸Chairman of the Joint Chiefs of Staff, Military Education Policy Document, CM-1618-93, (Washington D.C.: Office of the Chairman of the Joint Chiefs of Staff, 23 March 1993), I-4.
- ³⁴⁹Military Education Policy Document, (1993), IV-B-3, III-7.
- ³⁵⁰Military Education Policy Document, (1993), appendix A.
- ³⁵¹James R. Schlesinger, in a letter to the Sixth Worldwide Armed Forces Educational Conference, 6 December 1974, in Armand J. Galfo, "Voluntary In-Service Educational Opportunities: Air Force Policies - Individual Goals," Air University Review 27, no. 3 (March-April 1976): 31.
- ³⁵²Oliver W. Lewis, USAF, Director of Personnel Programs, memorandum to ALMAJCOM/DP on the subject "Graduate Study Through the Air Force Education Services Program," 4 February 1975, in Galfo, 30.

- ³⁵³Galfo, 31.
- ³⁵⁴Galfo, 30.
- ³⁵⁵Galfo, 32.
- ³⁵⁶Robert Quick, Formerly on Headquarters United States Air Force Staff in Personnel Programs, Education. Telephone interview with the author at his home in Bethesda, MD., 2 February 1996.
- ³⁵⁷Groves, 25.
- ³⁵⁸Galfo, 32.
- ³⁵⁹Air University History, vol. 1, (Maxwell AFB.: Air University, 1962), 56.
- ³⁶⁰Air University History, vol. 1, (Maxwell AFB.: Air University, 1963), 41-42.
- ³⁶¹Air University History, vol. 1, (1987), 135.
- ³⁶²Air University History, vol. 1, (Maxwell AFB, AL.: Air University, 1987), 135.
- ³⁶³Roger W. Alford, Prevalence of Careerism Among US Air Force Officers, (Maxwell AFB, AL: Air University Press, January 1989), 1-8.
- ³⁶⁴Alford, 77.
- ³⁶⁵Dennis E. Showalter, "Two Different Worlds? The Military Historian and the U.S. Air Force," Air University Review 31, no. 4 (May-June 1980): 30.
- ³⁶⁶"Officer Professional Development for Lieutenants," Air Power Journal 4, no. 3 (Fall 1990): 14-15.
- ³⁶⁷Alford, 81-82.
- ³⁶⁸Billy J. Boles, letter to all Senior Raters. "Subject: Officer Evaluation System (OES) Senior Rater Policy Letter Number 2," (Randolph AFB, TX.: Headquarters Air Force Military Personnel Center, 14 November 1988), 2.
- ³⁶⁹Larry D. Welch, letter to all Air Force Officers, "Subject: Revised Officer Evaluation System (OES)," (Washington D.C.: Office of the Chief of Staff, 16 March 1988), 1.
- ³⁷⁰OES Officer Evaluation System Your Guide to the Revised Officer Evaluation System, (Randolph AFB, TX.: Headquarters Air Force Military Personnel Center, January 1988), 2.
- ³⁷¹Department of the Air Force, Air Force Pamphlet 36-6, USAF Officer's Guide to the Officer Evaluation System, (Washington D.C.: Department of the Air Force 1 August 1988), 26.
- ³⁷²Air Force Pamphlet 36-6, (1988), 26.
- ³⁷³Air Force Pamphlet 36-6, (1988), 28.
- ³⁷⁴Air Force Pamphlet 36-6, (1988), 29.
- ³⁷⁵"Demystifying Promotions--Master's Degrees and Promotability," 13 Jananuary 1995, Air Force News Service Electronic Bulletin Board, 2.
- ³⁷⁶"Demystifying Promotions," 2.
- ³⁷⁷"Demystifying Promotions," 2-3.
- ³⁷⁸Merrie Schilter Lowe, "Quality of Life Survey Results Released," 26 September 1995, Air Force News Service Electronic Bulletin Board, 1068.

³⁷⁹Mary W. Daley, Headquarters US Air Force, DPPPEB Roadshow, 13 September 1995, narrative slide 42.

³⁸⁰Ronald Fogleman, "Air Force 'masks' advanced degrees for some officers," (by line Washington D.C.: Air Force News Service), in Columbus Air Force Base, (Mississippi) Silver Wings, 12 January 1996.

CHAPTER FIVE

SUMMARY AND CONCLUSIONS

The research examined the question: For the line officer corps, how has education in the USAF emphasized the need for an academic degree? To answer this research question this study examined the following hypotheses: the evolution of the command architecture has emphasized the need for academic degrees, and the evolution of doctrine and policy have emphasized the need for academic degrees.

The first hypothesis was that the evolution of the command architecture has emphasized the need for academic degrees. The answer to eight questions provided the data to test the hypothesis.

The first question was: Why were the command organizations of Air University and Air Training Command chosen?

Because the AF defined education and training very differently, it sought to create a unique command responsible for all aspects of education and a different command responsible for training. The AF allocated resources to one command or another based on whether the program in question fit the definition of education or training. The education command, Air University, recognized the precarious position it would occupy if its programs were seen to be redundant of those that were available in the civilian world. Degree education was available elsewhere and was not initially emphasized as an integral program element at Air University.

The second question was: What was the emphasis of Air University?

The Air University saw for itself a vital role in the survival of the United States. That role was the development of air power theorists. In order to accomplish that role Air University believed there was a fundamental need for the programs it administered under the name Professional Military Education. In order to enhance the ability of Air University to fulfill its

mission, the professional education of the officer corps, it needed to enhance the capabilities and prestige of its faculty. Degree education was seen as the method to accomplish this goal. A prime measure of the quality of the student body and the quality of the faculty at Air University has been the level of formal education, represented by academic degrees, each has obtained.

The third question was: How did Air University integrate degree granting education into its programs?

Air University established cooperative programs with George Washington University, then with Auburn University, and both of these programs were eliminated. The senior leadership of Air University viewed with suspicion any program which potentially competed for the time and attention of the student body. Although Air University leadership was apparently able to overcome its suspicions, the programs could not withstand the scrutiny of congressional review. The recent authority granted Air University to award a degree to graduates of the School of Advanced Airpower Studies, a second year program for Air Command and Staff College, was a break from the method of earlier efforts to integrate degree education. In this instance Air University established a program for which there existed a need, then obtained degree authority for the program in its own right, not under the auspices of another university. The program is yet to be accredited by the regional accreditation agency, though the procedure is underway. Without this accreditation the degree is not recognized outside of the military.

The fourth question was: How did the Air Force Institute of Technology emphasize academic degrees?

Because of its origins as a pioneering research facility for the AF, and because of its vision of establishing itself as an advanced engineering school on the order of the Massachusetts Institute of Technology, AFIT was moved to seek accreditation of its programs. This move was at first resisted by Air University, but the fears that accreditation would lead to duplication of programs were allayed and AFIT became the locus for degree granting education in the Air Force. AFIT was not supposed to become the sole supplier of advanced degree education for the AF.

The fifth question was: Who established degree education requirements for the Air Force?

The first requirement was established as a goal by Air University. This goal was for every newly commissioned officer to hold a baccalaureate degree prior to his commissioning. A series of boards met to establish policy for the Air Force education system. By and large the boards were concerned with the educational programs offered by Air University and did not establish specific requirements for degree education. It was not until the Air Force Educational Requirements Board was established in 1958 that there was an attempt to quantify specific degree education needs of the Air Force. Initial attempts were simple percentages of various degrees for officers in related career fields. Eventually the board was replaced by staff procedures which reviewed each manpower position for which an academic degree was desired, and then specified precise education requirements. The Graduate Education Program, the policies for Professional Continuing Education, and the policies for Fellowships, Scholarships, and Grants describe the mechanism by which the AF allows an extremely limited number of officers to pursue advanced degree education. Since establishing the original goal Air University, the education command, appeared to have very little, if anything, to do with establishing or determining what the Air Force's educational requirements are.

The sixth question was: Did the United States Air Force Academy have a role in emphasizing degree granting education?

USAFA was established in part to raise the general academic level of the officer corps. Its educational philosophy has emphasized the need for a broad curriculum including the arts and sciences in addition to professional military subjects which would enable its graduates to undertake graduate education in the civilian world.

The seventh question was: What was the emphasis of the 1978 merger of Air University and Air Training Command?

The rationale offered for the merger notwithstanding: managerial efficiencies, cost savings, the consolidation of officer accession programs, and increased clout at the Air Staff and

Pentagon due to representation by a four star general, Air University was opposed to the merger and welcomed the divestiture. Its major objection was the loss of prestige of its PME programs, both in the civilian academic community and among the sister services. The command realignment had little to do with degree education.

The final question was: What was the emphasis of the 1993 merger?

The merger was the result of the Year of Training review whose major emphasis was on the enlisted training programs and the flying training programs. Degree education was addressed in that the new command was tasked to create career life-cycle education and training objectives that reduced uncertainties concerning requirements for advancement. One of the prime motivating factors in the restructuring was the down-sizing of the Air Force. However, the leadership attempted to apply lessons learned from the previous abortive attempt and endeavored to avoid subordinating education to training. The result was an organization which was neither assigned programs nor provided resources based on a strict definition of education. It was an organization whose charter emphasized the spectrum of career development and the synergy between training and education. The education in the desired synergy appeared to be PME, not degree education.

Did the data support the first hypothesis? The answer is partially. The command structure for education in the AF was not created to emphasize degree education, however, degrees were emphasized. The two major reorganizations of the command architecture likewise have not emphasized degree education. Air University emphasized degree education to raise the competency of its faculty and the prestige of its programs. The 1994 legislation which allowed Air University to award a degree for SAAS did not signal a significant change to emphasizing degree education due to that school's extremely limited purpose. AFIT did emphasize degree education and sought accreditation of its programs for much the same reason that Air University sought to attract men with advanced degree education to its faculty. For AFIT the possession of degrees by a large number of the faculty helped to ensure professional competency, and the possession of a degree by an AFIT graduate was an element of his functional ability. USAFA was the single AF institution whose existence had been justified in part by its role in raising the general

education level of the officer corps, through awarding an undergraduate degree. The single greatest statement made about degree education by the command structure in the AF was Air University's goal of 1947. In 1967 when an undergraduate degree became an official requisite for a commission and the goal was realized, nothing replaced it. Since that time the command system has not had a unifying vision of how degree education should be emphasized.

The second hypothesis was that the evolution of doctrine and policy has emphasized the need for academic degrees. The answer to six questions provided data to test the hypothesis.

The first question was: What was the motivation for the earliest educational policies?

The paucity of officers with degree education in the years following World War Two created a situation in which the AF did not have enough men with the educational requisites to accomplish its increasingly technical mission. Personnel considerations prevented a quick solution to this problem and led to Air University's afore mentioned goal.

The second question was: How did academic degree granting education evolve in basic doctrine?

Until the goal of requiring a baccalaureate degree for new officers was achieved in 1967 official doctrine had nothing to say about degree education. Thereafter education evolved from a cursory reference to personnel policies into the idea that advanced degree education is a useful tool in establishing the personal commitment of an officer to the ideals of AF professionalism.

The third question was: Did policy support the education goal established in 1947?

Accession programs were gradually modified to eliminate sources of officers which allowed men without a baccalaureate degree to obtain a commission. The AF developed limited programs to fill specific educational requirements, not to raise general education levels. The AF developed off-duty education programs to achieve the goal of raising the general level of the officer corps education, through personal effort on the officer's own time.

The fourth question was: How was degree granting education integrated into career guidance?

Each evolution of career guidance has emphasized degree education as an important element of the education program. Initially a degree was something an officer acquired early in his career, especially if he was ambitious. It progressed to become a requisite for success, then a requisite for professionalism. The AF established a split culture in the education of tactical officers and technical officers, the later having more immediate requirements for advanced degrees. Furthermore, the AF limited its program of education by excluding the possibility of universal educational advancement. Career guidance offered has been inconsistent among the fields. AF policy, especially after 1979, specifically emphasized advanced degree education, but there was no vision in the emphasis. Career guidance available in the 1990s makes a direct, clear-cut link between an advanced degree in any field and an officer's promotion expectation.

The fifth question was: Have there been any trends which have affected policies for degree granting education?

Beginning in the early 1970s, and influenced heavily by the 1986 Goldwater-Nichols Defense Reorganization Act, there has been a trend to increase the relevance and utility of PME by making it more like a rigorous civilian institution of higher learning. The end result of this trend has been to create a role for advanced degree education: the academic credentials required to attend a senior service school can be directly attributed to the emphasis on joint education at the senior level, and the desire to increase the prestige of those senior service schools.

The final question was: Are there instances of policy support for degree granting education for reasons other than professional development?

The all volunteer force created in the 1970s relied heavily on educational incentives to recruit and retain quality individuals. The promise of education was a reward or benefit for a service minded individual. Similarly, the opportunity to advance one's education was used as an incentive to attract men to the difficult to fill missile officer career field. Finally, a paradox was discovered in which an over-emphasis on advanced degree education had developed into a problem for senior AF leadership. They felt that the tendency to emphasize advanced degrees in order to influence the promotion process was inappropriate and therefore new promotion policies

(e.g. masking advanced degree achievement at promotion proceedings) were instituted to resolve the conflict.

Did the data support the second hypothesis? Yes. All areas examined indicate that since 1947 AF policy and doctrine have emphasized the need for academic degrees. Early policies seem clearly focused by one, all encompassing goal: raise the educational level of the AF by creating a requisite of an undergraduate degree for a commission. Once this goal was achieved the policy continued in effect. Doctrine evolved to express an expectation of an officer advancing his education during off-duty hours. Career guidance created similar expectations. However, there was never a specific policy or doctrinal requirement for an advanced academic degree.

Conclusion

How has education in the USAF emphasized the need for an academic degree? The unifying theme relative to degree education has been its identification with quality. Air University's emphasis has not been on degree education but rather has been on PME, which is becoming increasingly like a graduate degree program at a civilian institution. The quality of the schools, as well as the quality of the individuals destined to attend PME, have been accentuated if the faculty or student possessed a degree education. Except for technical career fields which had validated requirements for a specific advanced degree in a particular position, the research found no attempt to relate specific competencies to the general desire for officers to continue to advance their degree credentials. The possession alone of a degree has been used as a measure of the quality of an individual as he competed for one of the more prestigious PME schools, those whose graduates go on to become senior leaders of the AF.

The goal stated by Air University in 1947 served to provide a vision to the AF education system. When the goal was achieved but not replaced or updated, there was a perceptible shift from regarding education as a requisite for the profession to regarding degree education as a requisite of professionalism. The AF had succeeded in establishing a culture which prized the individual effort required to obtain a degree education on one's own time. After the conditions which spawned that culture changed, after every officer had an undergraduate degree, the culture

persisted in prizing the effort. The effort itself was the object, not the degree. This became codified in doctrine. An advanced degree is a tangible symbol of an officer's dedication to the ideals of AF professionalism.

Areas for Further Research

A few areas suggest the need for further research. Is the enlisted force, or any portion of it, today in the same situation regarding education that the officer corps was in 50 years ago? Would the AF benefit if more aggressive policies were developed to encourage enlisted academic advancement?

An area for further research lies in the potential to create a synergy between advanced degree education and PME. A longtime goal of Air University has been to become more like a civilian university accredited at the graduate level. Research that would establish a viable curriculum which would accomplish the goals of PME and satisfy the requirements for graduate accreditation would aid the process.

Data was obtained which suggested that the Military Personnel Center had a significant role in establishing educational policy. The breadth of that role is unknown. Research which would define the role the Military Personnel Center has had in educational policymaking may identify areas for more intimate coordination with Air Education and Training Command.

This thesis identified the fact that no goal has been established to replace the 1947 goal of universal undergraduate education. Research which would articulate a new goal and identify possible effects would aid in focusing the ongoing individual efforts to pursue advanced academic degree education.

SOURCES CONSULTED

Books

- Alford, Roger W. Prevalence of Careerism Among US Air Force Officers. Maxwell AFB, AL.: Air University Press, 1989.
- Casey, Dennis F. Reshaping the Future: From ATC to AETC. Randolph AFB, TX.: Office of History and Research, Headquarters Air Education and Training Command, 1994.
- Davis, Richard L., and Frank P. Donnini. Professional Military Education for Air Force Officers: Comments and Criticisms. Maxwell AFB, AL.: Air University Press, 1991.
- Keucher, Ernie, ed. Air Force Institute of Technology Yesterday Today Tomorrow 1919-1994. Wright-Patterson AFB, OH.: Air Force Institute of Technology, 1994.
- Laubenthal, Sanders A. "Chapter One--AFIT History: First Sixty Years 1919-1979." Reprint, Air Force Institute of Technology Yesterday Today Tomorrow. Wright-Patterson AFB, OH.: Air Force Institute of Technology, 1979. In Air Force Institute of Technology Yesterday Today Tomorrow 1919-1994, ed. Ernie Keuchner. Wright-Patterson AFB, OH.: Air Force Institute of Technology, 1994.
- Leedy, Paul D., Practical Research Planning and Design, 4th ed. The American University. New York: Macmillan Publishing Co., 1989.
- McPeak, Merrill A. Selected Works. Maxwell AFB, AL.: Air University Press August 1995.
- Reynolds, Richard T. Heart of the Storm: The Genesis of the Air Campaign against Iraq. Maxwell AFB, Ala.: Air University Press, 1995.
- Short, Lawrence O. Air University in War: The Role of Education in Wartime. Maxwell AFB, AL.: Air University Press, 1985.
- Talbert, Gene E., John P. Hourigan, and James L Hoyt, An Analysis of the System For Determining and Validating Air Force Professional Education Requirements, Maxwell AFB, AL.: Air Force Systems Command, April 1971.
- The Air Officer's Guide. 1st ed. Harrisburg, PA.: The Military Service Publishing Company, 1948. 2d ed., 1949. 4th ed., 1950. 5th ed., 1951. 6th ed., 1952. 7th ed., 1953. 8th ed., 1955. 9th ed., 1956. 10th ed., 1957. 11th ed., 1959.

The Air Officer's Guide. 14th ed. Harrisburg, PA.: Stackpole Books. 1962. 15th ed., 1963. 16th ed., 1965. 17th ed., 1966. 18th ed., 1967. 19th ed., 1968. 20th ed., 1969. 22d ed., 1971.

The Air Force Officer's Guide, 23rd ed. A. J. Kinney, ed. Harrisburg, PA.: Stackpole Books. 1973. 24th ed., 1978. 25th ed., 1981.

The Air Force Officer's Guide, 26th ed. A. J. Kinney and John H. Napier, III, eds. Harrisburg, PA.: Stackpole Books, 1983.

The Air Force Officer's Guide, 27th ed. John H. Napier, III, ed. Harrisburg, PA.: Stackpole Books, 1986. 28th ed., 1989. 29th ed., 1992.

Turabian, Kate L. A Manual for Writers. 5th ed. Chicago: The University of Chicago Press. 1987.

Weigley, Russell F. The American Way of War. Bloomington: Indiana University Press, 1973.

Periodicals and Articles

"Air Force Almanac The United States Air Force in Facts and Figures." Air Force Magazine 64, no. 5 (May 1981), 166.

Anderson, William L. "The Whole Man? A Look At The Neglected Half of Air Force Education." Air University Review 23, no. 6 (September-October 1972): 60-65.

Barnes, Dieter. "Education: Formal Schooling *Plus* Personal Preparation." Air University Review 36, no. 2 (January-February 1985): 99-100.

Barron, John B. "Wanted: Intellectual Leadership." Air University Quarterly Review 3, no. 3 (Winter 1949): 17,21

Bowers, William H. "Qualitative Educational Requirements For Professional Military Education." Air University Quarterly Review 13, no. 1 (Summer 1961): 85-89.

Combs, Cecil E. "Science, Liberal Arts, or Both?" Air University Quarterly Review 10, no. 3 (Fall 1958): 3-9.

Donovan, G. Murphy. "Strategic Literacy." Airpower Journal 2, no. 4 (Winter 1988): 69-75.

Drew, Dennis M. "Joint Operations The World Looks Different From 10,000 Feet." Airpower Journal 2, no. 3 (Fall 1988): 5-15.

Galfo, Armand J. "Voluntary In-Service Educational Opportunities: Air Force Policies - Individual Goals." Air University Review 27, no. 3 (March-April 1976): 26-33.

- Gatlin, Jesse C., Jr. "The Role of The Humanities in Educating The Professional Officer." Air University Review 20, no. 1 (November-December 1968): 21-25.
- Grier, Peter. "The New Look in Training." Air Force Magazine 69, no. 4 (April 1993): 46-48.
- Groves, Kenneth J. "Air University And The Professional Education System." Air University Review 26, no. 5 (July-August 1975): 11-25.
- Hammer, Wendell A. "Which Officers Should be Educated?" Air University Quarterly Review 6, no. 1 (Spring 1953): 74-82.
- Kline, John A. "Education and Training: Some Differences." Air University Review 36, no. 2 (January-February 1985): 94-95.
- Lewis, Oliver W. USAF, Director of Personnel Programs, memorandum to ALMAJCOM/DP. "Graduate Study Through the Air Force Education Services Program." 4 February 1975. In Armand J. Galfo, "Voluntary In-Service Educational Opportunities: Air Force Policies - Individual Goals," Air University Review 27, no. 3 (March-April 1976): 26-33.
- Lisack, John P. "Educational Requirements of the USAF Officer Corps." Air University Quarterly Review 13, no. 2 (Fall 1961): 97-98.
- _____. "Identification and Use of Educational Qualifications in the New Personnel Management System." Air University Quarterly Review 14, no. 3 (Summer 1963): 85-89.
- _____. "Air Force Officer Education." Air University Review 16, no. 1 (November/December 1964): 84-91.
- Luehman, Arno H. "The New Air War College." Air University Review 17, no. 2, (January-February 1966): 15-25.
- McDermott, Robert F. "Educating Cadets for the Aerospace Age The Academic Program of the U.S. Air Force Academy." Air University Quarterly Review 13, no. 1 (Summer 1961): 3-17.
- _____. "The USAF Academy Academic Program." Air University Review 20, no. 1 (November-December 1968): 11-20.
- Mehuron, Tamar A., ed. "The Air Force in Facts and Figures." Air Force Magazine 78, no. 5 (May 1995): 36.
- Mooreman, Thomas S. "Basic Philosophical Concepts of The United States Air Force Academy." Air University Review 20, no. 1 (November-December 1968): 2-10.
- "Officer Professional Development for Lieutenants." Air Power Journal 4, no. 3 (Fall 1990): 14-32.

- Parrish, Noel F. "New Responsibilities of Air Force Officers." Air University Quarterly Review 1, no. 1 (Spring 1947): 41
- "Professional Military Education in 2020," unsigned editorial, Airpower Journal 9, no. 2 (Summer 1995): 28-31.
- Prouty, Leroy F. "Procurement of Officer Personnel." Air University Quarterly Review 6, no. 2 (Summer 1953): 70-77.
- Ralph, John E. "Professional Identity in a Plural World." Air University Review 27, no. 2 (January-February 1976): 11-25.
- Richardson, William R. "Officer Training and Education." Military Review (October 1984): 26-28, 33. In Department of the Air Force. Air Force Manual 1-1, Basic Aerospace Doctrine of the United States Air Force, vol. 2. "Essay X, Training the Air Force: The Four Components." Washington D.C.: Department of the Air Force, March 1992.
- Rogers, F. Michael. "Why Professional Military Education?" Air University Review 26, no. 5 (July-August 1975): 2-9.
- Schlesinger, James R. Letter to the Sixth Worldwide Armed Forces Educational Conference. 6 December 1974. In Armand J. Galfo. "Voluntary In-Service Educational Opportunities: Air Force Policies - Individual Goals." Air University Review 27, no. 3 (March-April 1976): 26-33.
- Shannahan, Kevin. "Why Am I Here? Military History and the Professional Officer." Air University Review 36, no. 1 (November-December 1984): 88-89.
- Showalter, Dennis E. "Two Different Worlds? The Military Historian and the U.S. Air Force." Air University Review 31, no. 4 (May-June 1980): 29-37.
- Smith, Dale O. "Air University 2000 AD." Air University Quarterly Review 6, no. 4 (Winter 1953-1954): 22-28.
- Sorensen, Neal G. "Implications of a Volunteer Force." Air University Review 22, no. 3. (March-April 1971): 47-52.
- Torresson, Thomas S., Jr. "A plan for the Educational Development of the Air Force Officer." Air University Quarterly Review 3, no. 4 (Spring 1950): 46-56.
- Ulrich, Robert J. "Officer Education: Let's Make it Attractive." Air University Quarterly Review 10, no. 4 (Summer 1960): 28-32.
- _____. "Don't Let Efficiency Squelch Education!" Air University Quarterly Review 10, no. 4 (Winter 1958-1959): 91-97.
- Widnall, Shelia E. "The State of the Air Force." Airpower Journal 9, no. 1 (Spring 1995): 4-14.

Government Documents

- Air Training Command History, Volume 1. Randolph AFB, TX.: Air Training Command, 1978.
- Air Training Command History, Volume 1. Randolph AFB, TX.: Air Training Command, 1983.
- Air University. Air University Plan for the Development of The Air War College. Maxwell AFB, AL.: Headquarters Air University, 1965.
- _____. "The Training and Education System for Officers of the U. S. Air Force." Maxwell AFB, AL.: Air University Press, November 1949. In Benton F. Fuller, Jr. "Professional Education for USAF Officers." Ph.D. diss., Yale University, 1951.
- Air University History, Volume 1. Maxwell AFB, AL.: Air University, 1961.
- Air University History, Volume 1. Maxwell AFB, AL.: Air University, 1962.
- Air University History, Volume 1. Maxwell AFB, AL.: Air University, 1963.
- Air University History. Maxwell AFB, AL.: Air University, 1978.
- Air University History. Maxwell AFB, AL.: Air University, 1983.
- Air University History, Volume 1. Maxwell AFB, AL.: Air University, 1987.
- Air University History. Maxwell AFB, AL.: Air University, 1989-1990.
- Boles, Billy J. Letter to all Senior Raters, "Subject: Officer Evaluation System (OES) Senior Rater Policy Letter Number 2." Randolph AFB, TX.: Headquarters Air Force Military Personnel Center, 14 November 1988.
- Chairman of the Joint Chiefs of Staff. Military Education Policy Document, CM-344-90, Washington D.C.: Office of the Chairman of the Joint Chiefs of Staff, 1 May 1990.
- _____. Military Education Policy Document, CM-1618-93, Washington D.C.: Office of the Chairman of the Joint Chiefs of Staff, 23 March 1993.
- Department of the Air Force. Air Force Instruction 36-2302, Personnel Professional Development. Washington: Department of the Air Force, CD-ROM Version, 26 August 1994.
- _____. Air Force Instruction 36-2306, (Washington: Department of the Air Force, 25 July 1994),
- _____. Air Force Manual 1-2, Air Doctrine United States Air Force Basic Doctrine. Washington D.C.: Department of the Air Force, 1 April 1953.
- _____. Air Force Manual 1-2, Air Doctrine United States Air Force Basic Doctrine. Washington D.C.: Department of the Air Force, 1 April 1954.

- _____. Air Force Manual 1-2, *Air Doctrine United States Air Force Basic Doctrine*. Washington D.C.: Department of the Air Force, 1 April 1955.
- _____. Air Force Manual 1-2, *Air Doctrine United States Air Force Basic Doctrine*. Washington D.C.: Department of the Air Force, 1 December 1959.
- _____. Air Force Manual 1-2 *Aerospace Doctrine United States Air Force Basic Doctrine Draft #5*. Washington D.C.: Department of the Air Force, 31 January 1963.
- _____. Air Force Manual 1-1, *Aerospace Doctrine United States Air Force Basic Doctrine*. Washington D.C.: Department of the Air Force, 14 August 1964.
- _____. Air Force Manual 1-1, *Aerospace Doctrine United States Air Force Basic Doctrine*. Washington D.C.: Department of the Air Force, 28 September 1971.
- _____. Air Force Manual 1-1, *Aerospace Doctrine United States Air Force Basic Doctrine*. Washington D.C.: Department of the Air Force, 15 January 1975.
- _____. Air Force Manual 1-1, *Aerospace Doctrine United States Air Force Basic Doctrine*. Washington D.C.: Department of the Air Force, 14 February 1979.
- _____. Air Force Manual 1-1, *Aerospace Doctrine United States Air Force Basic Doctrine*. Washington D.C.: Department of the Air Force, 16 March 1984.
- _____. Air Force Manual 1-1, *Basic Aerospace Doctrine of the United States Air Force, Volume I*. Washington D.C.: Department of the Air Force, March 1992.
- _____. Air Force Manual 1-1, *Basic Aerospace Doctrine of the United States Air Force, Volume 2*. "Essay X Training the Air Force: The Four Components." Washington D.C.: Department of the Air Force, March 1992.
- _____. Air Force Manual 36-23, *Officer Personnel Officer Career Management*. Washington D.C.: Department of the Air Force, 13 June 1969.
- _____. Air Force Pamphlet 36-6, *USAF Officer's Guide to the Officer Evaluation System*. Washington D.C.: Department of the Air Force, 1 August 1988.
- _____. Air Force Regulation 34-3, *Personnel Services Air Force Information and Education Program*. Washington D.C.: Headquarters United States Air Force, 15 July 1949.
- _____. Air Force Regulation 36-5, *Officer Personnel Appointment of Officers in the Regular Air Force*. Washington D.C.: Department of the Air Force, 25 February 1952.
- _____. Air Force Regulation 36-5; *Officer Personnel Appointment of Officers in the Regular Air Force*. Washington D.C.: Department of the Air Force, 31 March 1959.
- _____. Air Force Regulation 36-5, *Officer Personnel Appointment of Officers in the Regular Air Force*. Washington D.C.: Department of the Air Force, 15 August 1961.

- _____. Air Force Regulation 36-23, Officer Personnel Officer Career Management. Washington D.C.: Department of the Air Force, 16 April 1976.
- _____. Air Force Regulation 36-23, Officer Personnel Officer Career Management. Washington D.C.: Department of the Air Force, 26 December 1979.
- _____. Air Force Regulation 50-15, Training: Officer Training at Civilian Institutions. Washington D.C.: Department of the Air Force, 4 Oct 49.
- _____. Air Force Regulation 53-7, Schools: Officer Advanced Academic Degree Requirements, RCS: HAF P207. Washington: Department of the Air Force, 16 June 1967.
- [_____.] Analysis of The Purpose, Pattern, Scope and Structure of the Officer Education Program of Air University. By Ralph W. Tyler. Maxwell AFB, AL.: Air Research and Development Command, May 1955.
- _____. "Navigator Career Path Guide." Randolph AFB, TX.: Air Force Military Personnel Center, September 1993.
- [_____.] OES Officer Evaluation System Your Guide to the Revised Officer Evaluation System. Randolph AFB, TX.: Headquarters Air Force Military Personnel Center, January 1988.
- _____. "Pilot Career Path Guide." Randolph AFB, TX.: Air Force Military Personnel Center, September 1993.
- Department of Defense. Office of the Assistant Secretary of Defense (Manpower). Officer Education Study. Volume 1. Washington D.C.: U.S. Department of Defense, Office of the Assistant Secretary of Defense (Manpower), 1966.
- _____. Office of the Assistant Secretary of Defense (Manpower). Officer Education Study. Volume 2. Washington D.C.: U.S. Department of Defense, Office of the Assistant Secretary of Defense (Manpower), 1966.
- Fairchild, Muir S. "Second Board of Visitors Report." Maxwell AFB, AL.: Headquarters Air University, 1946. In Department of the Air Force, Air Force Manual 1-1, Basic Aerospace Doctrine of the United States Air Force, Volume II. "Essay X, Training the Air Force: The Four Components." Washington D.C.: Department of the Air Force, March 1992.
- Headquarters, Army Air Forces. Army Air Force Letter 50-21, "Subject: Graduate Training of AAF Officers in Civilian Educational Institutions." Washington D.C.: Headquarters, Army Air Forces, 29 October 1946.
- _____. Army Air Force Letter 50-71, "Subject: Undergraduate College Education in Civilian Institutions for Air Corps Officers, Regular Army." Washington D.C.: Headquarters, Army Air Forces, 24 September 1947.

Institute for National Strategic Studies. The Teaching of Strategy and Foreign Policy at the Senior War Colleges: A Personal Assessment. By Eugene V. Rostow and John E. Endicott, 11 June 1987.

Joint Chiefs of Staff. Joint Professional Military Education Policy Document. SM-189-84. Washington D.C.: Office of the Joint Chiefs of Staff, 23 March 1984.

National Defense University Transition Planning Committee. National Defense University Transition Planning Committee Final Report. By Robert L. J. Long, Chairman. [Washington D.C.: Office of the Joint Chiefs of Staff], 25 August 1989.

Petrie, Sandra L., ed. "The Flyby," 2d ed. With a cover letter by Brigadier General John D. Hopper, Jr., Commandant of Cadets. United States Air Force Academy, CO.: 34th Training Wing, 1995.

Report of the Air University Committee on the Academic Levels of the Faculties of the Professional Military Schools. By Ralph W. Keller, Chairman. Maxwell AFB, AL.: Ad Hoc Committee on Faculty Educational Level, 1 March 1963.

Report of The Lightner Board-Review of Air War College and Air Command and Staff College. By Lawrence S. Lightner, Chairman. Maxwell AFB, AL.: Air University, 22 March 1973.

Report of the Panel on Military Education of the One Hundredth Congress. By Ike Skelton, Chairman. Washington D.C.: House of Representatives, Committee on Armed Services, 21 April 1989.

Report of the Scientific Advisory Board, By Louis N. Ridenour, Chairman. 21 September 1949. In Sanders A. Laubenthal. "Chapter One--AFIT History: First Sixty Years 1919-1979." Reprint, Air Force Institute of Technology Yesterday Today Tomorrow. Wright-Patterson AFB, OH: Air Force Institute of Technology, 1979. In Air Force Institute of Technology Yesterday Today Tomorrow 1919-1994, ed. Ernie Keuchner. Wright-Patterson AFB, OH: Air Force Institute of Technology, 1994.

Schlatter, David M. "Organization and Mission." In First Report of the Board of Visitors. Maxwell Field, AL.: Air University Press, 1946.

_____. "The Educational Program of the Army Air Forces." In Proceedings of the Educational Advisory Staff Conference. Maxwell Field, AL.: Air University Press, 11-12 July 1947.

Senior Military Schools Review Board. The Report of the Senior Military Schools Review Board On Recommendation to the Chairman of the Joint Chiefs of Staff Regarding Professional Military Education in Joint Matters. By Russell E. Dougherty, Chairman, (Washington D.C.: Office of the Joint Chiefs of Staff, 7 May 1987), 17.

The National War College and the Industrial College of the Armed Forces Survey Board. Report to the Joint Chiefs of Staff of the National War College and the Industrial College of the

Armed Forces Survey Board. By Dr. James Phinney Baxter, III, Chairman. Washington D.C.: Office of the Joint Chiefs of Staff, 20 January 1955.

The Report of The JCS Initial Certification Group On Recommendations to the Chairman of the Joint Chiefs of Staff Regarding Professional Military Education and JCS Program for Joint Professional Military Education. Washington D.C.: Office of the Joint Chiefs of Staff, 22 May 1989.

The Senior Service Colleges: Conclusions and Initiatives. By William P. Clements, Jr., Chairman. Washington D.C.: U.S. Government Printing Office, 5 June 1975.

United States Air Force Educational Conference. Report of The Conference. By Thomas S. Power, Chairman. Maxwell AFB, AL.; USAF Educational Conference, 17 November 1959.

USAFIT letter to US Office of Education, 10 December 1953. In Sanders A. Laubenthal. "Chapter One--AFIT History: First Sixty Years 1919-1979." Reprint, Air Force Institute of Technology Yesterday Today Tomorrow. Wright-Patterson AFB, OH: Air Force Institute of Technology, 1979. In Air Force Institute of Technology Yesterday Today Tomorrow 1919-1994. ed. Ernie Keuchner. Wright-Patterson AFB, OH: Air Force Institute of Technology, 1994.

U.S. Congress. Senate. Committee on Armed Services. Report [To accompany S. 3712]. by Mr. Hendrickson. 83d Cong., 2d sess., 1954.

U.S. Congress. Senate. Air Force Academy Act of 1954. 83rd Cong., 2d sess., , S.R. 1041. United States Code Congressional and Administrative News. Vol. 2. (1954).

Welch, Larry D. Letter to all Air Force Officers. "Subject: Revised Officer Evaluation System (OES)." Washington D.C.: Office of the Chief of Staff, 16 March 1988.

Williams, Kenneth R. "The Use of Civilian Educators and Institutions In the Program of Air University." In Proceedings of the Educational Advisory Staff Conference. Maxwell Field, AL.: Air University Press, 11-12 July 1947.

Unpublished Materials

"Chapter C Need For Degree-Granting Authority." In Response to the U.S. Department of Education Self-Appraisal Questionnaire. Maxwell AFB, AL.: Air University, undated.

Fuller, Benton F. Jr. "Professional Education for USAF Officers." Ph.D. diss., Yale University, 1951.

Hearnsberger, Brian J. "Marine Corps Cooperative Degree Program." Master's thesis, United States Army Command and General Staff College, Fort Leavenworth, 1995.

O'Sullivan, Thomas M. "The Awarding of a Master's Degree to Regular Course Graduates of The Command and General Staff Officer Course." Master's thesis, United States Army Command and General Staff College, Fort Leavenworth, 1995.

Santoni, Mathew. "Notes To Accompany Analysis Of AFIT Sponsored AAD Pay Back." Randolph AFB, TX.: Air Force Military Personnel Center, DPSAA, 20 November 1995.

Briefings

Daley, Mary W. Headquarters U.S. Air Force, "DPPPEB Roadshow." Narrative to slide 42, 13 September 1995.

Electronic Sources

"Demystifying Promotions--Master's Degrees and Promotability." 13 January 1995. Air Force News Service Electronic Bulletin Board.

Lowe, Merrie Schilter. "Quality of Life Survey Results Released." 26 September 1995. Air Force News Service, 1068.

Interviews

Quick, Robert. Former member of Air Staff. Telephone interview with author, Bethesda, MD, 2 February 1996.

Spenser, Lieutenant Colonel William. Editor of Air Power Journal. Telephone interview with author, Maxwell AFB, AL, 2 October 1995.

Tilford, Dr. Earl H. Former editor of Air University Review. Telephone interview with author, Carlisle Barracks, PA, 2 October 1995.

World Wide Web

Air Education and Training Command, Home Page. "AETC Role and Mission Statement." [online] Available: <http://www.aetc.af.mil/mission/mission.html>

Air University Catalogue 1995-1996. "Air Command and Staff College." [on line] Available: <http://www.au.af.mil/au/cat/acsc.htm>

Heitkamp, Steven. Headquarters Air Force Military Personnel Command, Office of Statistics and Analysis, AFMPC Home Page. "Officer Demographics." [on line] Available: <http://www.mpc.af.mil/analysis/demograf/demo.htm>

USAF Fact Sheet 94-06. "Air University." [on line] Available: [hppt://www.dtic.dla.mil/airforcelink/pa/factsheets/Air_University.html](http://www.dtic.dla.mil/airforcelink/pa/factsheets/Air_University.html)

USAF Fact Sheet 94-08. Air Education and Training Command, Air Force Home Page. "AETC Role and Mission Statement." [on line] Available: http://www.dtic.dla.mil/airforcelink/pa/factsheets/Air_Education_and_Training_Co.html

INITIAL DISTRIBUTION LIST

1. Air University Library
Maxwell Air Force Base AL 36112
2. Colonel Robert W. Peterman
Commander, Air Force Element
U.S. Army Command and General Staff College
1 Reynolds Ave.
Fort Leavenworth, KS 66027
3. Combined Arms Research Library
U.S. Army Command and General Staff College
1 Reynolds Ave.
Fort Leavenworth, KS 66027-1352
4. Defense Technical Information Center
Cameron Station
Alexandria, VA 22314
5. Ellen L. Godfrey
U.S. Army Command and General Staff College
Evaluation and Standardization
1 Reynolds Ave.
Fort Leavenworth, KS 66027
6. Jerome A. Ennels
HQ AU/HO
55 LeMay Plaza South
Maxwell AFB, AL 36112-6335
7. Major Samuel J. Walker
U.S. Army Command and General Staff College
Air Force Element
1 Reynolds Ave.
Fort Leavenworth, KS 66027

8. Rebbecca M. Campbell, Ph.D.
U.S. Army Command and General Staff College
Faculty Development Branch
1 Reynolds Ave.
Fort Leavenworth, KS 66027
9. Ronald E. Cuny, Ed.D.
U.S. Army Command and General Staff College
Center for Army Leadership
1 Reynolds Ave.
Fort Leavenworth, KS 66027

CERTIFICATION FOR MMAS DISTRIBUTION STATEMENT

1. Certification Date: 19/April/1996
2. Thesis Author: Major James L. Boston
3. Thesis Title: A History of the Role of Traditional Education for
the United States Air Force Line Officer Corps, 1947-1995

4. Thesis Committee Members
Signatures:

Ronald E. Curry
Samuel J. Walker
Ellen L. Godfrey

5. Distribution Statement: See distribution statements A-X on reverse, then circle appropriate distribution statement letter code below:

A B C D E F X

SEE EXPLANATION OF CODES ON REVERSE

If your thesis does not fit into any of the above categories or is classified, you must coordinate with the classified section at CARL.

6. Justification: Justification is required for any distribution other than described in Distribution Statement A. All or part of a thesis may justify distribution limitation. See limitation justification statements 1-10 on reverse, then list, below, the statement(s) that applies (apply) to your thesis and corresponding chapters/sections and pages. Follow sample format shown below:

S	-----SAMPLE-----	SAMPLE	-----SAMPLE-----	SAMPLE	-----S
A	Limitation Justification Statement	/	Chapter/Section	/	Page(s)
M					
P	Direct Military Support (10)	/	Chapter 3	/	12
L	Critical Technology (3)	/	Sect. 4	/	31
E	Administrative Operational Use (7)	/	Chapter 2	/	13-32
	-----SAMPLE-----		SAMPLE	-----SAMPLE-----	

Fill in limitation justification for your thesis below:

Limitation Justification Statement	Chapter/Section	Page(s)
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

7. MMAS Thesis Author's Signature:

J. L. Boston

STATEMENT A: Approved for public release; distribution is unlimited.
(Documents with this statement may be made available or sold to the general public and foreign nationals.)

STATEMENT B: Distribution authorized to U.S. Government agencies only (insert reason and date ON REVERSE OF THIS FORM). Currently used reasons for imposing this statement include the following:

1. Foreign Government Information. Protection of foreign information.
2. Proprietary Information. Protection of proprietary information not owned by the U.S. Government.
3. Critical Technology. Protection and control of critical technology including technical data with potential military application.
4. Test and Evaluation. Protection of test and evaluation of commercial production or military hardware.
5. Contractor Performance Evaluation. Protection of information involving contractor performance evaluation.
6. Premature Dissemination. Protection of information involving systems or hardware from premature dissemination.
7. Administrative/Operational Use. Protection of information restricted to official use or for administrative or operational purposes.
8. Software Documentation. Protection of software documentation--release only in accordance with the provisions of DoD Instruction 7930.2.
9. Specific Authority. Protection of information required by a specific authority.
10. Direct Military Support. To protect export-controlled technical data of such military significance that release for purposes other than direct support of DoD-approved activities may jeopardize a U.S. military advantage.

STATEMENT C: Distribution authorized to U.S. Government agencies and their contractors: (REASON AND DATE). Currently most used reasons are 1, 3, 7, 8, and 9 above.

STATEMENT D: Distribution authorized to DoD and U.S. DoD contractors only: (REASON AND DATE). Currently most used reasons are 1, 3, 7, 8, and 9 above.

STATEMENT E: Distribution authorized to DoD only; (REASON AND DATE). Currently most used reasons are 1, 2, 3, 4, 5, 6, 7, 8, 9, and 10.

STATEMENT F: Further dissemination only as directed by (controlling DoD office and date), or higher DoD authority. Used when the DoD originator determines that information is subject to special dissemination limitation specified by paragraph 4-505, DoD 5200.1-R.

STATEMENT X: Distribution authorized to U.S. Government agencies and private individuals of enterprises eligible to obtain export-controlled technical data in accordance with DoD Directive 5230.25; (date). Controlling DoD office is (insert).